vinyl acetate and/or a polyester. The composition also comprises a coating on the fibres. The coating is a **basement membrane** component, agar, agarose, gelatin, a glycosaminoglycan a collagen, gum arabic, fibronectin, laminin, hyaluronic acid and/or an attachment peptide. The cells are chondrocyte cells, fibroblast cells capable of differentiation into chondrocytes, or bone precursor cells capable of differentiation into chondrocytes.

USE - The cell scaffold compositions may be used for production of joint relinings, growth of elastic cartilage for plastic or reconstructive replacement of cartilage structures (e.g. the **ear** or the **nose** ), or for repair of large bone defects.

ADVANTAGE - The compositions can be cast or molded into desired shapes, or can be manipulated at the time of **implantation** . The cells can retain their normal morphology and cell function.

Dwg.0/10

Derwent Class: A96; B04; D16; D22; P32
International Patent Class (Main): C12N-011/08
International Patent Class (Additional): A61F-002/18; A61F-002/28; C12N-005/00

**17/34/4 (Item 4 from file: 350)**
DIALOG(R)File 350:Derwent WPIX

008461275
WPI Acc No: 1990-348275/199046

***Formation of cartilage structures - by attaching chondrocyte cells to biocompatible matrix in nutrient environment***

Patent Assignee: LANGER R S (LANG-I); VACANTI C A (VACA-I); VACANTI J P (VACA-I); CHILDRENS MEDICAL CENT (CHIL-N); MASSACHUSETTS INST TECHNOLOGY (MASI ); CHILDRENS HOSP BOSTON (CHIL-N); CHILDRENS MEDICAL CENTER CORP (CHIL-N); CHILDRENS HOSP ROSTON (CHIL-N)
Inventor: LANGER R S; VACANTI C A; VACANTI J P
Number of Countries: 020 Number of Patents: 011
Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week | |
|---|---|---|---|---|---|---|---|
| WO 9012603 | A | 19901101 | | | | 199046 | B |
| AU 9055568 | A | 19901116 | | | | 199107 | |
| US 5041138 | A | 19910820 | US 89339155 | A | 19890417 | 199136 | |
| EP 469070 | A | 19920205 | EP 90907835 | A | 19900416 | 199206 | |
| JP 4505717 | W | 19921008 | JP 90507077 | A | 19900416 | 199247 | |
| | | | WO 90US2091 | A | 19900416 | | |
| AU 635025 | B | 19930311 | AU 9055568 | A | 19900416 | 199317 | |
| JP 94006155 | B2 | 19940126 | JP 90507077 | A | 19900416 | 199407 | |
| | | | WO 90US2091 | A | 19900416 | | |
| EP 469070 | B1 | 19960911 | EP 90907835 | A | 19900416 | 199641 | |
| | | | WO 90US2091 | A | 19900416 | | |
| CA 2051663 | C | 19960806 | CA 2051663 | A | 19900416 | 199642 | |
| DE 69028524 | E | 19961017 | DE 628524 | A | 19900416 | 199647 | |
| | | | EP 90907835 | A | 19900416 | | |
| | | | WO 90US2091 | A | 19900416 | | |
| ES 2095252 | T3 | 19970216 | EP 90907835 | A | 19900416 | 199714 | |

Priority Applications (No Type Date): US 89339155 A 19890417; US 86933018 A 19861120; US 87123579 A 19871120
Cited Patents: EP 282746; EP 339607; US 4553272; US 4846835; WO 8803785; WO 8900413; 3.Jnl.Ref
Patent Details:

| Patent No | Kind | Lan | Pg | Main IPC | Filing Notes |
|---|---|---|---|---|---|
| WO 9012603 | A | | 45 | | |
| Designated States (National): AU CA FI JP KR NO | | | | | |
| Designated States (Regional): AT BE CH DE DK ES FR GB IT LU NL SE | | | | | |
| EP 469070 | A | | | | |
| Designated States (Regional): AT BE CH DE ES FR GB IT LI LU NL SE | | | | | |
| JP 4505717 | W | | 45 | A61L-027/00 | Based on patent WO 9012603 |
| AU 635025 | B | | | A61L-027/00 | Previous Publ. patent AU 9055568<br>Based on patent WO 9012603 |
| JP 94006155 | B2 | | | A61L-027/00 | Based on patent JP 4505717<br>Based on patent WO 9012603 |
| EP 469070 | B1 | E | 22 | A61L-027/00 | Based on patent WO 9012603 |
| Designated States (Regional): AT BE CH DE DK ES FR GB IT LI LU NL SE | | | | | |
| CA 2051663 | C | | | C12N-011/00 | |
| DE 69028524 | E | | | A61L-027/00 | Based on patent EP 469070<br>Based on patent WO 9012603 |
| ES 2095252 | T3 | | | A61L-027/00 | Based on patent EP 469070 |

Abstract (Basic): WO 9012603 A

A system for growing a cartilaginous structure is claimed comprising a biocompatible matrix in a nutrient environment and chondrocyte cells attached to the matrix, where the matrix is structured to provide free exchange of nutrients and waste to the attached cells in the absence of vascularisation. The matrix may be formed from eg. polyanhydrides, polyorthoesters, polyglycolic acids, polylactic acids, collagen, teflon, nylon, ethylene vinyl acetate or polyesters. The matrix may be coated with eg. **basement membrane** components, agar, agarose, gelatin, gum arabic, collagens, fibronectin, laminin, hyaluronic acid, glycosaminoglycans or attachment peptides.

Also claimed is a method for making a cartilaginous structure by providing a bicompatible matrix in a nutrient environment and attaching cartilage cells to the matrix.

USE/ADVANTAGE - The matrices can be formed of the required shape and flexibility for reconstructive and plastic surgery and are able to produce high cell densities. They can be used in vivo for eg. the growth of hyaline cartilage for joint relinings, the growth of elastic cartilage for plastics or reconstructive replacement of cartilage structures or repair of large bone defects. They can also be used for the prodn. of bioactive molecules in vitro, eg. proteinase inhibitors and collagenase inhibitors.

Dwg.0/10

Abstract (Equivalent): EP 469070 B

Use of a biocompatible synthetic polymeric matrix, the matrix being formed of fibres or a fibrous mesh and made from either a non-degradable material or a biodegradable material which degrades by hydrolysis or a combination thereof and chondrocytes, fibroblasts or bone-precursor cells attached to the matrix, wherein the matrix is structured to provide free exchange of nutrients and waste to the attached said cells in the absence of vascularisation in the manufacture of a cartilaginous structure or surface, ora bone structure, for **implantation** in, or addition to, a patient, wherein the said matrix is formed into a desired shape of a cartilate structure or surface or for repair of a bone defect in the said patient.

(Dwg.0/10

Abstract (Equivalent): US 5041138 A

Process for replacing or repairing cartilage structures comprises immobilising living cells on a rigid or flexible biocompatible, biodegradable synthetic polymer matrix, pref. coated with membrane components;proliferation of the cells in vitro; and **implantation**. Cells which propagate under these

conditions are cartilage, bone, skin and nerve cells. USE - The process is applicable to the repair or replacement of cartilage damaged by inflammation, trauma, ageing or congenital defection, or replacement of bone, **nose** and **ear** tissues, etc. (8pp
Derwent Class: B04; D16; D22; P32; P34
International Patent Class (Main): A61L-027/00; C12N-011/00
International Patent Class (Additional): A61F-002/30; A61K-037/00; C07C-245/00; C12N-005/00

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File 350:Derwent WPIX 1963-2003/UD,UM &UP=200351
File 347:JAPIO Oct 1976-2003/Apr(Updated 030804)
File 371:French Patents 1961-2002/BOPI 200209
Set     Items   Description
S1         28   AU='BADYLAK S' OR AU='BADYLAK S F'
S2         10   AU='SPIEVACK A R'
S3          1   S1 AND S2
S4        251   VOCAL()CORD? ?
S5        109   SUBMUCOSA
S6        378   (BASEMENT OR HYALINE)()MEMBRANE? ? OR (BASAL OR BASEMENT)(-
              )LAMINA
S7         36   S1:S2 NOT S3
S8          0   S7 AND S4
S9         18   S7 AND S5:S6
S10    772857   HEAD OR NECK
S11         1   S9 AND S10
S12        17   S9 NOT S11
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**3/34/1 (Item 1 from file: 350)**

DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.
013270038
WPI Acc No: 2000-441944/200038

***Repair or replacement of head and neck tissues involves removing the damaged or diseased portion of the tissue, and replacing it with a graft construct of vertebrate submucosa or basement membrane***

Patent Assignee: PURDUE RES FOUND (PURD )
Inventor: **BADYLAK S F ; SPIEVACK A R**
Number of Countries: 090 Number of Patents: 004
Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week | |
|---|---|---|---|---|---|---|---|
| WO 200032254 | A1 | 20000608 | WO 99US28300 | A | 19991201 | 200038 | B |
| AU 200027068 | A | 20000619 | AU 200027068 | A | 19991201 | 200044 | |
| GB 2360948 | A | 20011010 | WO 99US28300 | A | 19991201 | 200167 | |
| | | | GB 200114322 | A | 20010612 | | |
| AU 761153 | B | 20030529 | AU 200027068 | A | 19991201 | 200346 | |

Priority Applications (No Type Date): US 98110465 P 19981201; US 98110401 P 19981201
Patent Details:

| Patent No | Kind | Lan | Pg | Main IPC | Filing Notes |
|---|---|---|---|---|---|
| WO 200032254 | A1 | E | 26 | A61L-027/38 | |

Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW

| | | | |
|---|---|---|---|
| AU 200027068 | A | | Based on patent WO 200032254 |
| GB 2360948 | A | A61L-027/60 | Based on patent WO 200032254 |
| AU 761153 | B | A61L-027/38 | Previous Publ. patent AU 200027068<br>Based on patent WO 200032254 |

Abstract (Basic): WO 200032254 A1

NOVELTY - Repair or replacement of head and neck tissues involves removing the damaged or diseased portion of the tissue, and replacing the removed portion with a graft construct containing vertebrate submucosa or basement membrane.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for the use of submucosa or vertebrate basement to manufacture a non-immunogenic tissue graft composition for repairing vocal cords and other soft tissues of the head and neck.

USE - For repairing or replacing head and neck tissues.

ADVANTAGE - The graft constructs induce proliferation or growth of endogenous cells to form native tissues to invade structure, including an epithelial cell layer, connective tissue, and functional muscle.

pp; 26 DwgNo 0/0

Technology Focus:

TECHNOLOGY FOCUS - INSTRUMENTATION AND TESTING - Preferred Components: The graft construct formed as a multilayered homolaminate comprises a single thickness sheet of submucosa or a vertebrate basement membrane. The submucosa is 2-12 (preferably 4-6) layers of urinary bladder, stomach, or preferably intestinal. The intestinal submucosa comprises the tunica submucosa delaminated from the tunica muscularis and the luminal portion of the tunica mucosa. Preferred Tissues: The head and neck tissues are vocal cord, larynx, palette, attached gingiva, nasal, or auricular tissues.

Derwent Class: D22; P32; P34
International Patent Class (Main): A61L-027/38; A61L-027/60
International Patent Class (Additional): A61F-002/10; A61F-002/20

**11/34/1 (Item 1 from file: 350)**
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.
013980873
WPI Acc No: 2001-465087/200150

***Devitalized matrix for inducing repair of tissue defects in mammal, comprises isolated devitalized mammalian epithelial basement membrane and tunica propria immediately adjacent to basement membrane***

Patent Assignee: ACELL INC (ACEL-N)
Inventor: **SPIEVACK A R**
Number of Countries: 095 Number of Patents: 017
Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week | |
|---|---|---|---|---|---|---|---|
| WO 200145765 | A1 | 20010628 | WO 2000US34938 | A | 20001220 | 200150 | B |
| AU 200125906 | A | 20010703 | AU 200125906 | A | 20001220 | 200164 | |
| EP 1239897 | A1 | 20020918 | EP 2000989397 | A | 20001220 | 200269 | |
| | | | WO 2000US34938 | A | 20001220 | | |
| US 20030054022 | A1 | 20030320 | US 99171733 | P | 19991222 | 200323 | |
| | | | US 2000691345 | A | 20001018 | | |
| | | | US 2002280158 | A | 20021025 | | |
| US 20030059404 | A1 | 20030327 | US 99171733 | P | 19991222 | 200325 | |
| | | | US 2000691345 | A | 20001018 | | |
| | | | US 2002280430 | A | 20021025 | | |
| US 20030059405 | A1 | 20030327 | US 99171733 | P | 19991222 | 200325 | |
| | | | US 2000691345 | A | 20001018 | | |
| | | | US 2002280552 | A | 20021025 | | |
| US 20030059406 | A1 | 20030327 | US 99171733 | P | 19991222 | 200325 | |
| | | | US 2000691345 | A | 20001018 | | |
| | | | US 2002280582 | A | 20021025 | | |
| US 20030059407 | A1 | 20030327 | US 99171733 | P | 19991222 | 200325 | |
| | | | US 2000691345 | A | 20001018 | | |
| | | | US 2002280678 | A | 20021025 | | |
| US 20030059409 | A1 | 20030327 | US 2000691345 | A | 20001018 | 200325 | |

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|---|---|---|---|---|---|---|---|
| | | | US 2002280802 | A | 20021025 | | |
| US 20030059410 | A1 | 20030327 | US 99171733 | P | 19991222 | 200325 | |
| | | | US 2000691345 | A | 20001018 | | |
| | | | US 2002280818 | A | 20021025 | | |
| US 20030059411 | A1 | 20030327 | US 99171733 | P | 19991222 | 200325 | |
| | | | US 2000691345 | A | 20001018 | | |
| | | | US 2002281035 | A | 20021025 | | |
| US 20030064111 | A1 | 20030403 | US 2000691345 | A | 20001018 | 200325 | |
| | | | US 2002280935 | A | 20021025 | | |
| US 20030064112 | A1 | 20030403 | US 99171733 | P | 19991222 | 200325 | |
| | | | US 2000691345 | A | 20001018 | | |
| | | | US 2002281372 | A | 20021025 | | |
| US 6576265 | B1 | 20030610 | US 99171733 | P | 19991222 | 200340 | |
| | | | US 2000691345 | A | 20001018 | | |
| US 6579538 | B1 | 20030617 | US 99171733 | P | 19991222 | 200341 | |
| | | | US 2000691590 | A | 20001018 | | |
| JP 2003518078 | W | 20030603 | WO 2000US34938 | A | 20001220 | 200346 | |
| | | | JP 2001546704 | A | 20001220 | | |
| US 20030133916 | A1 | 20030717 | US 99171733 | P | 19991222 | 200348 | |
| | | | US 2000691345 | A | 20001018 | | |
| | | | US 2003337152 | A | 20030107 | | |

Priority Applications (No Type Date): US 2000691590 A 20001018; US 99171733 P 19991222; US 2000691345 A 20001018; US 2002280158 A 20021025; US 2002280430 A 20021025; US 2002280552 A 20021025; US 2002280582 A 20021025; US 2002280678 A 20021025; US 2002280802 A 20021025; US 2002280818 A 20021025; US 2002281035 A 20021025; US 2002280935 A 20021025; US 2002281372 A 20021025; US 2003337152 A 20030107

Patent Details:

| Patent No | Kind | Lan | Pg | Main IPC | Filing Notes |
|---|---|---|---|---|---|
| WO 200145765 | A1 | E | 23 | A61L-027/36 | |

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

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|---|---|---|---|---|
| AU 200125906 | A | | A61L-027/36 | Based on patent WO 200145765 |
| EP 1239897 | A1 | E | A61L-027/36 | Based on patent WO 200145765 |

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR

| | | | |
|---|---|---|---|
| US 20030054022 | A1 | A61F-002/00 | Provisional application US 99171733 |
| | | | Cont of application US 2000691345 |
| US 20030059404 | A1 | A61K-035/37 | Provisional application US 99171733 |
| | | | Cont of application US 2000691345 |
| US 20030059405 | A1 | A61K-035/37 | Provisional application US 99171733 |
| | | | Cont of application US 2000691345 |
| US 20030059406 | A1 | A61K-035/37 | Provisional application US 99171733 |
| | | | Cont of application US 2000691345 |
| US 20030059407 | A1 | A61K-035/37 | Provisional application US 99171733 |
| | | | Cont of application US 2000691345 |
| US 20030059409 | A1 | A61K-035/37 | Cont of application US 2000691345 |
| US 20030059410 | A1 | A61K-035/37 | Provisional application US 99171733 |
| | | | Cont of application US 2000691345 |
| US 20030059411 | A1 | A61K-035/37 | Provisional application US 99171733 |
| | | | Cont of application US 2000691345 |
| US 20030064111 | A1 | A61K-035/37 | Cont of application US 2000691345 |

US 20030064112 A1 A61K-035/37 Provisional application US 99171733
Cont of application US 2000691345
US 6576265 B1 A61K-035/38 Provisional application US 99171733
US 6579538 B1 A61K-035/22 Provisional application US 99171733
JP 2003518078 W 26 A61K-035/12 Based on patent WO 200145765
US 20030133916 A1 A61K-045/00 Provisional application US 99171733
Cont of application US 2000691345

Abstract (Basic): WO 200145765 A1

NOVELTY - A devitalized matrix for inducing repair of tissue defects in an mammal, comprises an isolated devitalized mammalian epithelial **basement membrane** and tunica propria immediately adjacent to **basement membrane** .

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(i) Method for inducing repair of tissue defect in mammal which involves providing a devitalized matrix to defect site;

(ii) A devitalized composition which comprises a mammalian epithelial **basement membrane** and tunica propria. The membrane and tunica propria are delaminated from cells of epithelium and abluminal portions of tunica propria; and

(iii) Manufacture of devitalized tissue graft composition which involves soaking epithelial tissue in a de-epithelializing solution to form a de-epithelialized tissue having **basement membrane** and abrading the tissue on an abluminal surface of tissue to form delaminated tissue. The delaminated tissue comprises a portion of epithelial **basement membrane** which induces endogeneous tissue restoration.

USE - For inducing restoration of diseased or defective cardiac tissue such as a portion of interventricular septum or cardiac valve such as pulmonic valve, aortic valve, right atrioventricular valve or left atrioventricular valve and myocardium (all claimed), epicardium, endocardium, pericardium and superior and inferior vena cava, and for inducing repair or replacement of tissue like connective tissues such as ligaments, tendons, cartilage, bone, joints, and muscle, epithelial tissues such as urinary bladder, and other tissues of urogenital tract, stomach, esophagus, and other tissues of gastrointestinal tract, liver, nervous tissue, tissues of **head** and **neck** , skin, and other tissues.

ADVANTAGE - The inclusion of epithelial **basement membrane** in devitalized mammalian tissue regenerative composition provides improved in vivo endogeneous cell propagation and tissue restoration. The induction method prevent complete loss of epithelial **basement membrane** . The tissue regenerative composition is applied as sheet or multilayer sheet of material, as extract in gel form, powder, tube, strips, cords or struts.

pp; 23 DwgNo 0/1

Technology Focus:

TECHNOLOGY FOCUS - BIOLOGY - Preferred Membrane: The **basement membrane** is derived from urinary bladder and small intestine.

Preferred Matrix: The matrix is sutured at tissue defect, injected into tissue defect, applied to the tissue defect fixation device or mixed with a pharmaceutical agent. The matrix is shaped to conform to diseased or defective cardiac tissue. The matrix comprises an injectable form of matrix, and a pharmaceutical agent. The matrix restores or replaces a portion of interatrial septum.

Preferred Method: The de-epithelializing solution comprises 1.0 N saline. The abluminal surface comprises a tissue surface deeper than

epithelial **basement membrane** . The restoration of diseased or defective cardiac tissue further comprises induction of endogeneous epithelial repair.
Derwent Class: B04; B07; C06; D16; D22; P32; P34
International Patent Class (Main): A61F-002/00; A61K-035/12; A61K-035/22; A61K-035/37; A61K-035/38; A61K-045/00; A61L-027/36
International Patent Class (Additional): A61K-035/34; A61K-035/36; A61L-027/00; A61P-043/00

**12/26,TI/1 (Item 1 from file: 350)**
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.
013240272
WPI Acc No: 2000-412146/200035
**Suppressing cell mediated immune response and protecting immunogenic biomaterials from the host immune system using vertebrate** submucosa

**12/26,TI/2 (Item 2 from file: 350)**
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.
013099536
WPI Acc No: 2000-271408/200023
**Improved tissue construct comprising submucoas of warm-blooded vertebrate and pre-selected eukaryotic cells, useful for enhancing repair of damaged or diseased tissue in vivo**

**12/26,TI/3 (Item 3 from file: 350)**
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.
012531265
WPI Acc No: 1999-337371/199928
**New composition comprising vertebrate submucosal tissue useful as tissue grafts**

**12/26,TI/4 (Item 4 from file: 350)**
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.
011960343
WPI Acc No: 1998-377253/199832
**Composition comprising liver** basement membrane **free of vertebrate cells - is useful in replacing or repairing damaged tissues, or in promoting in vitro cell growth**

**12/26,TI/5 (Item 5 from file: 350)**
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.
011960342
WPI Acc No: 1998-377252/199832
**Composition comprising stomach submucosal tissue - may used to promote growth of endogenous tissue, e.g. connective tissue, or to enhance in vitro growth of cells**

**12/26,TI/6 (Item 6 from file: 350)**
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.
011931546

WPI Acc No: 1998-348456/199830
**Preparation of bioactive extracts useful, e.g. in wound healing - by extracting sub-mucosal tissue with aqueous solution of extraction excipients, e.g. chaotropic agents, enzymes or enzyme inhibitor(s)**

**12/26,TI/7 (Item 7 from file: 350)**
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.
011535891
WPI Acc No: 1997-512372/199747
**Perforated submucosal tissue grafts constructs - has multiple strips of intestinal** submucosa **having planar surfaces delimited from both tunica muscularis with perforation defining longitudinal axis**

**12/26,TI/8 (Item 8 from file: 350)**
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.
010967817
WPI Acc No: 1996-464766/199646
**Tissue graft for repair of damaged or diseased urinary tract - uses sub-mucosal tissue of warm blooded vertebrate**

**12/26,TI/9 (Item 9 from file: 350)**
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.
010967813
WPI Acc No: 1996-464762/199646
**Making large area submucosal grafts - by fusing partially overlapped strips of tissue by compression under dehydrating conditions**

**12/26,TI/10 (Item 10 from file: 350)**
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.
010927668
WPI Acc No: 1996-424619/199642
**Graft compsn. for inducing formation of endogenous connective tissue - comprising urinary bladder** submucosa **obtained from e.g.cattle, sheep or pigs**

**12/26,TI/11 (Item 11 from file: 350)**
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.
010896190
WPI Acc No: 1996-393141/199639
**Transformation of eukaryotic cells, partic. in vivo - using exogenous nucleic acid sequence and sub-mucosal tissue of warm-blooded vertebrate**

**12/26,TI/12 (Item 12 from file: 350)**
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.
010887264
WPI Acc No: 1996-384215/199638
**Bone graft compsn. prepd. from intestinal** submucosa **tissue - useful in e.g. filling or bridging bone defects and assisting repair of high-risk fractures and attachment of prostheses and treating periodontal diseases**

**12/26,TI/13 (Item 13 from file: 350)**

DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.
010835686
WPI Acc No: 1996-332639/199633
**Prodn. of tissue graft compsns. from intestinal tissue of warm-blooded vertebrate - by comminution or protease digestion of intestinal sub-mucosal tissue, promote wound healing and induce formation of endogenous tissue in vivo**

**12/26,TI/14 (Item 14 from file: 350)**
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.
010048428
WPI Acc No: 1994-316139/199439
**New tissue graft constructs - comprise sheet of intestine of warm-blooded vertebrate and comminuted or protease-digested intestine**

**12/26,TI/15 (Item 15 from file: 350)**
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.
009736162
WPI Acc No: 1994-016012/199402
**Fluidised intestinal** submucosa **prepn. - by comminuting intestinal tissue and hydrating, useful for tissue repair or tissue reconstruction**

**12/26,TI/16 (Item 16 from file: 350)**
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.
009423726
WPI Acc No: 1993-117242/199314
**Graft for promoting autogenous tissue growth - formed from delaminated segment of stretched intestinal tissue**

**12/26,TI/17 (Item 17 from file: 350)**
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.
008164578
WPI Acc No: 1990-051579/199007
**Tissue graft compsn. of intestine segment - with tunica** submucosa **and muscularis mucosa and luminal part of tunica mucosa removed**

File 348:EUROPEAN PATENTS 1978-2003/Jul W03
File 349:PCT FULLTEXT 1979-2002/UB=20030807,UT=20030731

| Set | Items | Description |
|---|---|---|
| S1 | 49 | AU='BADYLAK STEPHEN F' OR AU='BADYLAK STEPHEN FRANCIS' |
| S2 | 11 | AU='SPIEVACK ALAN R' |
| **S3** | **2** | **S1 AND S2 [duplicates]** |
| S4 | 4543 | SUBMUCOSA? OR BASEMENT()MEMBRANE |
| S5 | 41 | (S1:S2 AND S4) NOT S3 |
| S6 | 41 | IDPAT (sorted in duplicate/non-duplicate order) |
| **S7** | **27** | **IDPAT (primary/non-duplicate records only)** |

**7/3,AB,K/2 (Item 4 from file: 349)**
DIALOG(R)File 349:PCT FULLTEXT

00568836
***SUBMUCOSA MODULATION OF MAMMALIAN IMMUNE RESPONSE***
***MODULATION SOUS-MUQUEUSE DE LA REPONSE IMMUNITAIRE CHEZ UN MAMMIFERE***
Patent Applicant/Assignee:
PURDUE RESEARCH FOUNDATION,
MEDICAL COLLEGE OF OHIO AT TOLEDO,
BADYLAK Stephen F,
McPHERSON Timothy B,
METZGER Dennis,
Inventor(s):
BADYLAK Stephen F,
McPHERSON Timothy B,
METZGER Dennis,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200032209 A2 20000608 (WO 0032209)
Application: WO 99US28302 19991201 (PCT/WO US9928302)
Priority Application: US 98110402 19981201
Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW GH GM KE LS MW SD SL SZ TZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
Publication Language: English
Fulltext Word Count: 9591
English Abstract
A composition and method for locally suppressing the cell mediated immune response of a vertebrate species is described. The method comprises contacting the site in need of immune suppression with a composition comprising vertebrate submucosa.
Fulltext Availability:
Detailed Description
Detailed Description
... groups for this model are described in the Table 2. On the specified day following **submucosa implantation** , the animals were sensitized by application of 20 pl of 0.5% dinitrofluorobenzene (DNFB; Sigma...
...1) to the shaved abdomen. Five days after sensitization with DNFB, the thickness of each **ear** of each animal were measured using a spring-loaded caliper (Mitutoyo). One **ear** was then challenged with 20 [tl of 0.2% DNFB while the other **ear** was left untreated. The thickness of each **ear** was measured again after 24 hours. The ratio of

post-challenge to pre-challenge thickness was calculated for each **ear** .
Table 2. Experimental Groups for Contact Den-natitis Assay
Sensitize Challenge
Group Strain n Treatment...strain specific responses do not appear to have confounded the analysis of the effect of **submucosa implantation** . In summary, the exposure to **submucosa** does not cause predisposition to infection or other immune insufficiency due to the Th2 dominant...
...or the other type. Similarly, the contact derniatitis model showed suppression of the intensity of **ear** swelling response, but the expected normal response was present and significantly greater than non-treated...

**7/TI/1 (Item 1 from file: 348)**
DIALOG(R)File 348:(c) 2003 European Patent Office. All rts. reserv.
**Stomach** submucosa **derived tissue graft**

**7/TI/3 (Item 3 from file: 348)**
DIALOG(R)File 348:(c) 2003 European Patent Office. All rts. reserv.
**ENHANCED** SUBMUCOSAL **TISSUE GRAFT CONSTRUCTS**

**7/TI/4 (Item 4 from file: 348)**
DIALOG(R)File 348:(c) 2003 European Patent Office. All rts. reserv.
**GALACTOSIDASE MODIFIED** SUBMUCOSAL **TISSUE**

**7/TI/5 (Item 5 from file: 348)**
DIALOG(R)File 348:(c) 2003 European Patent Office. All rts. reserv.
SUBMUCOSA **EXTRACTS**

**7/TI/6 (Item 6 from file: 348)**
DIALOG(R)File 348:(c) 2003 European Patent Office. All rts. reserv.
**TUBULAR** SUBMUCOSAL **GRAFT CONSTRUCTS**

**7/TI/7 (Item 7 from file: 348)**
DIALOG(R)File 348:(c) 2003 European Patent Office. All rts. reserv.
**STOMACH** SUBMUCOSA **DERIVED TISSUE GRAFT**

**7/TI/8 (Item 8 from file: 348)**
DIALOG(R)File 348:(c) 2003 European Patent Office. All rts. reserv.
**GASTRIC** SUBMUCOSAL **TISSUE AS A NOVEL DIAGNOSIS TOOL**

**7/TI/9 (Item 9 from file: 348)**
DIALOG(R)File 348:(c) 2003 European Patent Office. All rts. reserv.
**PERFORATED** SUBMUCOSAL **TISSUE GRAFT CONSTRUCTS**

**7/TI/10 (Item 10 from file: 348)**
DIALOG(R)File 348:(c) 2003 European Patent Office. All rts. reserv.
**LARGE AREA** SUBMUCOSAL **GRAFT CONSTRUCTS AND METHOD FOR MAKING THE SAME**

**7/TI/12 (Item 12 from file: 348)**
DIALOG(R)File 348:(c) 2003 European Patent Office. All rts. reserv.
**URINARY BLADDER** SUBMUCOSA **DERIVED TISSUE GRAFT**

**7/TI/13 (Item 13 from file: 348)**
DIALOG(R)File 348:(c) 2003 European Patent Office. All rts. reserv.
SUBMUCOSA **AS A GROWTH SUBSTRATE FOR CELLS**

**7/TI/15 (Item 15 from file: 348)**

DIALOG(R)File 348:(c) 2003 European Patent Office. All rts. reserv.
**FLUIDIZED INTESTINAL** SUBMUCOSA **AND ITS USE AS AN INJECTABLE TISSUE GRAFT**

**7/TI/16 (Item 16 from file: 348)**
DIALOG(R)File 348:(c) 2003 European Patent Office. All rts. reserv.
**GRAFT FOR PROMOTING AUTOGENOUS TISSUE GROWTH**

**7/TI/18 (Item 18 from file: 349)**
DIALOG(R)File 349:(c) 2003 WIPO/Univentio. All rts. reserv.
**BIOMATERIAL DERIVED FROM VERTEBRATE LIVER TISSUE**

**7/TI/20 (Item 20 from file: 349)**
DIALOG(R)File 349:(c) 2003 WIPO/Univentio. All rts. reserv.
**TISSUE REGENERATIVE COMPOSITION**

**7/TI/21 (Item 21 from file: 349)**
DIALOG(R)File 349:(c) 2003 WIPO/Univentio. All rts. reserv.
**BIOMATERIAL DERIVED FROM VERTEBRATE LIVER TISSUE**

**7/TI/22 (Item 22 from file: 349)**
DIALOG(R)File 349:(c) 2003 WIPO/Univentio. All rts. reserv.
**STOMACH** SUBMUCOSA **DERIVED TISSUE GRAFT**

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File 155:MEDLINE(R) 1966-2003/Aug W2
File   5:Biosis Previews(R) 1969-2003/Aug W1
File  73:EMBASE 1974-2003/Aug W1
File  34:SciSearch(R) Cited Ref Sci 1990-2003/Aug W1
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
Set     Items   Description
S1        530   AU='BADYLAK S' OR AU='BADYLAK S F':AU='BADYLAK STEVEN F'
S2         19   AU='SPIEVACK A' OR AU='SPIEVACK A R':AU='SPIEVACK AR'
S3          7   S1 AND S2
S4          3   RD (unique items) [too recent]
S5     159433   SUBMUCOSA? OR (BASEMENT OR HYALINE)()MEMBRANE? OR (BASAL OR
              BASEMENT)()LAMINA
S6        535   S1:S2 NOT S3
S7        223   S5 AND S6
S8         29   S7/1999 OR S7/2000
S9         58   S7/2001 OR S7/2002
S10         4   S7/2003
S11       132   S7 NOT S8:S10
S12        54   RD (unique items)
S13    584064   VOCAL()CORD? ? OR LARYNX OR LARYNGE? OR PALAT?? OR NASAL OR
              NOSE OR AURICULA?? OR EAR OR EARS
S14         0   S12 AND S13
S15   4816595   SURGICAL? OR SURGERY OR SURGERIES
S16        30   S12 AND S15
S17    628113   HEAD OR NECK
S18         0   S16 AND S17
S19         0   S8:S10 AND S13
S20         0   S8:S10 AND S17
S21        34   S8:S10 AND S15
S22        30   Sort S16/ALL/PY,D

22/6/4     (Item 4 from file: 155)
11680598   99115999   PMID: 9916170
   Small intestional submucosa : a rapidly resorbed bioscaffold for
augmentation cystoplasty in a dog model.
Winter 1998

 22/6/5     (Item 5 from file: 155)
11510336   98397802   PMID: 9730065
  Multilaminate resorbable biomedical device under biaxial loading.
Fall 1998

 22/6/9     (Item 9 from file: 155)
10681616   97030781   PMID: 8876722
  Histology after dural grafting with small intestinal submucosa .
Oct 1996

 22/6/10     (Item 10 from file: 155)
10479977   96289399   PMID: 8683741
Characterization of small intestinal submucosa regenerated canine detrusor:
assessment of reinnervation, in vitro compliance and contractility.
Aug 1996

 22/6/12     (Item 12 from file: 5)
10397427   BIOSIS NO.: 199699018572
Small-intestinal submucosa as a replacement graft for defects of the
```

**tunica albuginea in rats.**
1996

**22/6/15 (Item 15 from file: 155)**
10292710 96094591 PMID: 7490890
**Detrusor regeneration in the rat using porcine small intestinal** submucosal **grafts: functional innervation and receptor expression.**
Jan 1996

**22/9/1 (Item 1 from file: 5)**
DIALOG(R)File 5:Biosis Previews(R)
(c) 2003 BIOSIS. All rts. reserv.
13480579 BIOSIS NO.: 200200109400
**Perforated** submucosal **tissue graft constructs.**
AUTHOR: Whitson B; Cheng B; **Badylak S F**
AUTHOR ADDRESS: West Lafayette, Ind.**USA
JOURNAL: Official Gazette of the United States Patent and Trademark Office Patents 1210 (4):p3402 May 26, 1998
PATENT NUMBER: US 5755791 PATENT DATE GRANTED: May 26, 1998 19980526
PATENT ASSIGNEE: METHODIST HOSPITAL OF INDIANA; PURDUE RESEARCH FOUNDATION
PATENT COUNTRY: USA
ISSN: 0098-1133
DOCUMENT TYPE: Patent
RECORD TYPE: Citation
LANGUAGE: English
MAJOR CONCEPTS: Digestive System (Ingestion and Assimilation); Methods and Techniques; **Surgery** (Medical Sciences)
MISCELLANEOUS TERMS: BIOTECHNOLOGY; MULTIPLE INTESTINAL **SUBMUCOSA** STRIPS
CONCEPT CODES:
14001 Digestive System-General; Methods
11107 Anatomy and Histology, General and Comparative-Regeneration and Transplantation (1971- )
01004 Methods, Materials and Apparatus, General-Laboratory Methods

**22/9/2 (Item 2 from file: 5)**
DIALOG(R)File 5:Biosis Previews(R)
(c) 2003 BIOSIS. All rts. reserv.
13473576 BIOSIS NO.: 200200102397
**Large area** submucosal **tissue graft constructs.**
AUTHOR: Patel U H; Hiles M C; Whitson B; Cheng B; **Badylak S F** ; Kokini K
AUTHOR ADDRESS: W. Lafayette, Ind.**USA
JOURNAL: Official Gazette of the United States Patent and Trademark Office Patents 1206 (4):p2878-2879 Jan. 27, 1998
PATENT NUMBER: US 5711969 PATENT DATE GRANTED: Jan. 27, 1998 19980127
PATENT ASSIGNEE: METHODIST HOSPITAL OF INDIANA; PURDUE RESEARCH FOUNDATION
PATENT COUNTRY: USA
ISSN: 0098-1133
DOCUMENT TYPE: Patent
RECORD TYPE: Citation
LANGUAGE: English
MAJOR CONCEPTS: Digestive System (Ingestion and Assimilation); Methods and Techniques; **Surgery** (Medical Sciences)
MISCELLANEOUS TERMS: BIOTECHNOLOGY; FUSION; INTESTINAL **SUBMUCOSA** TISSUE
CONCEPT CODES:

14001 Digestive System-General; Methods
11107 Anatomy and Histology, General and Comparative-Regeneration and Transplantation (1971- )
01004 Methods, Materials and Apparatus, General-Laboratory Methods

**22/9/8 (Item 8 from file: 5)**
DIALOG(R)File 5:Biosis Previews(R)
(c) 2003 BIOSIS. All rts. reserv.
13414640 BIOSIS NO.: 200200043461
**Fluidized intestinal** submucosa **and its use as an injectable tissue graft**
AUTHOR: **Badylak S F** ; Demeter R J; Hiles M; Voytik S; Knapp P M Jr
AUTHOR ADDRESS: West Lafayette, Ind.**USA
JOURNAL: Official Gazette of the United States Patent and Trademark Office Patents 1186 (2):p1141 May 14, 1996
PATENT NUMBER: US 5516533 PATENT DATE GRANTED: May 14, 1996 19960514
PATENT ASSIGNEE: METHODIST HOSPITAL OF INDIANA, INC.; PURDUE RESEARCH FOUNDATION PATENT COUNTRY: USA
ISSN: 0098-1133
DOCUMENT TYPE: Patent
RECORD TYPE: Citation
LANGUAGE: English
MAJOR CONCEPTS: Digestive System (Ingestion and Assimilation); Methods and Techniques; Pharmacology; **Surgery** (Medical Sciences)
MISCELLANEOUS TERMS: HEALTH CARE; PHARMACEUTICALS; TRANSPLANTATION
CONCEPT CODES:
14001 Digestive System-General; Methods
22002 Pharmacology-General
11107 Anatomy and Histology, General and Comparative-Regeneration and Transplantation (1971- )
01004 Methods, Materials and Apparatus, General-Laboratory Methods

File 155:MEDLINE(R) 1966-2003/Aug W2

| Set | Items | Description |
|---|---|---|
| S1 | 3902 | 'VOCAL CORDS' OR DC='A4.329.364.737.' OR 'VOCAL FOLD' |
| S2 | 777 | 'VOCAL CORDS --SURGERY --SU' |
| S3 | 15554 | 'BASEMENT MEMBRANE' OR DC='A10.272.220.' OR DC='A10.615.17-9.' OR 'BASAL LAMINA' OR 'BASEMENT LAMINA' OR 'BRUCH MEMBRANE' |
| S4 | 26633 | 'LARYNX' OR DC='A4.329.' OR 'ARYTENOID CARTILAGE' OR 'CRICOID CARTILAGE' OR 'EPIGLOTTIS' OR 'GLOTTIS' OR 'GOBLET CELLS' OR 'LARYNGEAL CARTILAGES' OR 'LARYNGEAL MUCOSA' OR 'LARYNGEAL MUSCLES' OR 'THYROID CARTILAGE' OR 'VOCAL CORDS' |
| S5 | 23197 | 'PALATE' OR DC='A14.521.658.' OR DC='A14.549.617.' OR 'INCISIVE PAPILLA' OR 'PALATAL MUSCLES' OR 'PALATE, HARD' OR 'PALATE, SOFT' OR 'UVULA' |
| S6 | 548 | 'HEAD --SURGERY --SU' |
| S7 | 1831 | 'NECK --SURGERY --SU' |
| S8 | 3806 | SUBMUCOSA |
| S9 | 19327 | S3 OR S8 |
| S10 | 51235 | S1:S2 OR S4:S7 |
| S11 | 183 | S9 AND S10 |
| S12 | 941956 | SURGERY/DE OR SU/DE |
| S13 | 15 | S11 AND S12 |
| S14 | 15 | RD (unique items) |
| S15 | 5 | S14/1999:2003 |
| S16 | 10 | S14 NOT S15 |
| **S17** | **10** | **Sort S16/ALL/PY,D** |
| S18 | 0 | S6:S7 AND S11 |
| S19 | 495601 | GRAFT? ? OR HOMOGRAFT? ? OR HETEROGRAFT? ? OR TRANSPLANT? - OR IMPLANT? |
| S20 | 8 | S11 AND S19 |
| **S21** | **3** | **S20 NOT S13 [too recent]** |
| **S22** | **5** | **S20 NOT S21 [some duplicates; some not relevant]** |

**17/6/1**
11374781 98255728 PMID: 9596289
**Radiofrequency volumetric tissue reduction of the** palate **in subjects with sleep-disordered breathing.**
May 1998

**17/6/2**
10829042 97180078 PMID: 9028293
**Clinical evaluation of an acellular dermal allograft for increasing the zone of attached gingiva.**
Mar 1996

**17/6/5**
07872043 93327728 PMID: 8334965
**Tracheobronchopathia osteochondroplastica: a case report and a review of the literature.**
May 1993

**17/6/7**
05931813 88286230 PMID: 3165120
**Hydroxylapatite as a bone graft substitute in orthognathic surgery: histologic and histometric findings.**
Aug 1988

**17/9/6**

DIALOG(R)File 155:MEDLINE(R)

07057145 91298029 PMID: 2068929
**A new concept for reconstruction of atresias of** larynx **and trachea: lining of wound surfaces with autologous isolated respiratory epithelial cells.**
Gerhardt H J; Bohm K; Kaschke O; Biedermann F
ENT Clinic, University Hospital (Charite), Humboldt University, Berlin, Germany.
Acta oto-laryngologica (SWEDEN) 1991, 111 (2) p410-3, ISSN 0001-6489 Journal Code: 0370354
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
Subfile: INDEX MEDICUS
A new method, first applied two years ago in our clinic, has proved to be reliable for achieving a rapid reepithelialisation of epithelial defects after scar removal inside the trachea. The defect is seeded with isolated respiratory epithelial cells harvested the day before from the ethmoid. Isolation of epithelial cells was achieved by keeping the mucosa in 0.25% trypsin buffer solution under room temperature for about 16 h. Afterwards, the epithelial layer was separated from the **submucosa** using small forceps and knife. Cells were then isolated by pipetting. For seeding the wound the surface was covered with silastic sheeting and the cell suspension then injected into the cleft between both of them. Cell distribution occurred by capillary attraction. The tracheal lumen was maintained by inserting a silastic stent for about three weeks. So far, 10 patients between 6 and 45 years have been treated in this way. In 4 patients the tracheal wall additionally had to be stabilized using rip cartilage. Only in one case above the tracheostoma, considerable scar formation occurred again requiring a second operation some months later. In 8 patients decannulation was meanwhile possible.
Tags: Case Report; Human; Male
Descriptors: **Larynx** -- **surgery** -- **SU** ; *Trachea-- **surgery** -- **SU** ; *Wound Healing; Adolescent; Adult; Cell Separation; Child; Epithelial Cells; Epithelium--transplantation--TR; Ethmoid Sinus--cytology--CY; **Larynx** --abnormalities--AB; Methods; Middle Age; Mucous Membrane--cytology--CY; Mucous Membrane--transplantation--TR; Silicone Elastomers; Trachea --abnormalities--AB; Trachea--cytology--CY
CAS Registry No.: 0 (Silicone Elastomers)
Record Date Created: 19910813
Record Date Completed: 19910813

**17/9/8**
DIALOG(R)File 155:MEDLINE(R)

05458146 87136799 PMID: 3546221
**Dilatation of the** glottis **in bilateral vocal cord paralysis. Review of various surgical procedures and a report of personal experience using a functional lateral fixation surgical technic]**
Glottiserweiterung bei beidseitiger Stimmlippenlahmung. Ein Uberblick uber die verschiedenen Operationsverfahren und ein Erfahrungsbericht uber eine personliche Operationstechnik "Die funktionelle Lateralfixation".
Schobel H
HNO (GERMANY, WEST) Dec 1986, 34 (12) p485-95, ISSN 0017-6192 Journal Code: 2985099R

Document type: Journal Article ; English Abstract
Languages: GERMAN
Main Citation Owner: NLM
Record type: Completed
Subfile: INDEX MEDICUS

For the treatment of bilateral vocal cord paralysis, the author's technique consists of preservation of the posterior crico-arytenoid ligament as a hinge as well as turning and tilting of the arytenoid cartilage laterally. It is held in this position with three permanent retention sutures, two of them armed with heavy knots. These knots will reinforce the lateral rotation of the arytenoid cartilage. These sutures run in the **submucosa** horizontally along the anterior surface of the arytenoid cartilage and are fixed through burr holes on the posterior margin of the thyroid cartilage. This method developed from the original "King Procedure" leaves the laryngeal mucosa maximally undisturbed so that in 80% of the cases preliminary tracheotomy became unnecessary. During a period of 27 years, 110 patients were operated; 27 of them had a previously created tracheostoma. Out of the remaining 83, 16 had tracheotomy directly before surgery. Of the remaining 67 patients, four required postoperative tracheotomy for a few days only, while 63 did not require this additional treatment. The average hospital stay was 11 days. In the majority of cases the operation could be performed under local anaesthesia which helped to establish proper voice function.

Tags: Human

Descriptors: Vocal Cord Paralysis--**surgery**--**SU**; Adolescent; Adult; Aged; Aged, 80 and over; Airway Obstruction--**surgery**--**SU**; Child; Child, Preschool; Dilatation--methods--MT; Follow-Up Studies; **Laryngeal Cartilages**--**surgery**--**SU**; **Laryngeal Mucosa**--**surgery**--**SU**; Middle Age; Suture Techniques; Tracheotomy--methods--MT; **Vocal Cords**--**surgery**--**SU**

Record Date Created: 19870330
Record Date Completed: 19870330

**17/9/9**

DIALOG(R)File 155:MEDLINE(R)

05321277 86322662 PMID: 3753294

**A personal experience with subtotal and conservation surgery as treatment for laryngeal cancer.**

Calearo C; Bignardi L

Archives of oto-rhino-laryngology (GERMANY, WEST) 1986, 243 (3) p174-9, ISSN 0302-9530 Journal Code: 0414105

Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
Subfile: INDEX MEDICUS

A personal technique for laryngeal cancer reconstructive surgery is presented and discussed. The functional and therapeutic purpose of this surgery is to broaden its indications and to improve functional results. In particular, our surgical technique involves removal of the soft internal part of the cricoid cartilage (mucosa, **submucosa** and perichondrium), which is otherwise conserved. Satisfactory functional results can be achieved by: modeling of two symmetrical pseudoarytenoids; an anterior epiglottiplasty or the use of a Hiranandani base-of-the-tongue flap to close the anterior gap (if present); muscular flap lateral-plasty avoiding a cricoidhyoidpexy.

Tags: Human
Descriptors: **Cricoid Cartilage -- surgery -- SU ; * Laryngeal Cartilages -- surgery -- SU ; *Laryngeal Neoplasms-- surgery -- SU ; *Laryngectomy --methods--MT; Laryngeal Muscles -- surgery -- SU ; Thyroid Cartilage -- surgery -- SU ;** Tracheotomy--methods--MT
Record Date Created: 19860926
Record Date Completed: 19860926

```
File   5:Biosis Previews(R) 1969-2003/Aug W1
File  73:EMBASE 1974-2003/Aug W1
File  34:SciSearch(R) Cited Ref Sci 1990-2003/Aug W1
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
File 144:Pascal 1973-2003/Aug W1
File  94:JICST-EPlus 1985-2003/Aug W1
File  95:TEME-Technology & Management 1989-2003/Jul W4
File  99:Wilson Appl. Sci & Tech Abs 1983-2003/Jun
File  65:Inside Conferences 1993-2003/Aug W2
File  35:Dissertation Abs Online 1861-2003/Jul
File   6:NTIS 1964-2003/Aug W2
File   8:Ei Compendex(R) 1970-2003/Aug W1
Set     Items   Description
S1     140822   SUBMUCOSA? ? OR (BASEMENT OR HYALINE)()MEMBRANE? ? OR (BAS-
            AL OR BASEMENT)()LAMINA? ?
S2     167222   VOCAL()(CORD? ? OR FOLD? ?) OR LARYNX OR LARYNGE? OR PALAT-
            E? ? OR PALATAL
S3     425583   NASAL OR NOSE OR AURICULA? ? OR EAR OR EARS
S4       3614   (HEAD OR NECK)(2N)TISSUE
S5     673302   GRAFT? OR HOMOGRAFT? OR HETEROGRAFT? OR ALLOGRAFT? OR AUTO-
            GRAFT?
S6    2077781   IMPLANT? OR TRANSPLANT?
S7       6048   S1(S)S5:S6
S8        151   S7 AND S2:S4
S9     392262   S2:S4/TI,DE
S10        76   S8 AND S9
S11        52   RD (unique items)
S12        10   S11/1999:2003
S13        42   S11 NOT S12
S14        42   Sort S13/ALL/PY,D
S15        76   S8(S)S9
S16        42   S15 AND S14
S17       841   S7/TI,DE
S18         4   S16 AND S17
S19        38   S14 NOT S18
S20      1227   S1(3N)S5:S6
S21         6   S19 AND S20
S22        32   S19 NOT S21
S23        32   Sort S22/ALL/PY,D
S24   2418512   SURGERY/DE OR SURGICAL OR SU/DE
S25        16   S23 AND S24
S26        16   S23 NOT S25
```

**18/6/3 (Item 3 from file: 5)**
03599860 BIOSIS NO.: 000074015437
SUBMUCOSAL NASAL **SEPTUM RESECTION WITH AUTO RE** IMPLANTATION **OF CARTILAGE AND BONE IN RECURRENT** NASAL **BLEEDING IN THE PRESENCE OF HYPERTENSIVE DISEASE**
1981

**18/6/4 (Item 1 from file: 73)**
00215465 EMBASE No: 1974205634
Submucosal **septal resection followed by immediate reconstruction by bone** grafting
1974

**18/9/2 (Item 2 from file: 5)**
DIALOG(R)File 5:Biosis Previews(R)

06295884 BIOSIS NO.: 000086130067
**SURGERY FOR BILATERAL** NASAL **VALVULAR COLLAPSE**
AUTHOR: OCHI J W; DEWERD D L
AUTHOR ADDRESS: DIV. HEAD AND NECK SURGERY, UCSD MED. CENT., 225 DICKINSON ST., SAN DIEGO, CALIF. 92103, USA.
JOURNAL: RHINOLOGY (ROTT) 26 (2). 1988. 105-110. 1988
FULL JOURNAL NAME: RHINOLOGY (Rotterdam)
CODEN: RNGYA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH
ABSTRACT: The **nasal** valve is an important regulator of **nasal** airflow. Patients may suffer from **nasal** obstruction due to bilateral **nasal** valvular collapse combined with a drooping tip. A simple, effective technique of cartilage **grafting** to open the valve is forwarded. The advantages of this method include placing the **graft** in the **submucosal** plane which preserves mucosa and protects the **graft** from **nasal** secretions while healing.
DESCRIPTORS: HUMAN **NASAL** AIRFLOW CARTILAGE **GRAFTING** **SUBMUCOSAL** PLANE
CONCEPT CODES:
11105 Anatomy and Histology, General and Comparative-Surgery
12512 Pathology, General and Miscellaneous-Therapy (1971- )
16002 Respiratory System-Anatomy
16006 Respiratory System-Pathology
18001 Bones, Joints, Fasciae, Connective and Adipose Tissue-General; Methods
18006 Bones, Joints, Fasciae, Connective and Adipose Tissue-Pathology
16001 Respiratory System-General; Methods
BIOSYSTEMATIC CODES:
86215 Hominidae
BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA):
Animals
Chordates
Vertebrates
Mammals
Primates
Humans

**21/9/1 (Item 1 from file: 5)**
DIALOG(R)File 5:Biosis Previews(R)

09160984 BIOSIS NO.: 199497169354
***Fundamental frequency and amplitude perturbation in reconstructed canine vocal folds .***
AUTHOR: Jiang Jack J; Titze Ingo R(a); Wexler David B; Gray Steven D
AUTHOR ADDRESS: (a)Dep. Speech Pathology and Audiology, The University Iowa, Iowa City, IA 52242**USA
JOURNAL: Annals of Otology Rhinology & Laryngology 103 (2):p145-148 **1994**
ISSN: 0003-4894
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English
ABSTRACT: A **submucosal** fat autograft was **implanted** within the cover of injured **vocal** **folds** of 5 dogs. The **implant** occurred 6 weeks

after unilateral mucosal excision had been performed. Three months postoperatively the **larynges** of these animals were excised and their phonation was compared to that of normal dog **larynges** and to other **larynges** with mucosal excision (but without fat **grafting** ). Radiated acoustic pressure from the artificially driven **larynges** was recorded and digitized at 20 kHz with 16-bit resolution. Amplitude and fundamental frequency perturbations were extracted from a segment of phonation to assess the stability of the acoustic signals from the 3 groups. It was found that fat augmentation after mucosal excision reduced amplitude and frequency perturbation measures. There was no significant difference between fat-augmented and normal **vocal folds** . The acoustic measures were also positively correlated with phonation threshold and phonation efficiency measures reported earlier. The results suggest that **submucosal** fat **autograft implantation** within an injured **vocal fold** cover can restore not only the "ease" of phonation, but also the stability of phonation, which is a component of vocal quality.

DESCRIPTORS:
MAJOR CONCEPTS: Dental and Oral System (Ingestion and Assimilation); Physiology
BIOSYSTEMATIC NAMES: Canidae--Carnivora, Mammalia, Vertebrata, Chordata, Animalia
ORGANISMS: Canidae (Canidae)
BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA): animals; carnivores; chordates ; mammals; nonhuman vertebrates; nonhuman mammals; vertebrates
MISCELLANEOUS TERMS: ACOUSTIC MEASUREMENTS; AUTOGRAFT; FUNDAMENTAL FREQUENCY; PHONATION

CONCEPT CODES:
11107 Anatomy and Histology, General and Comparative-Regeneration and Transplantation (1971- )
19004 Dental and Oral Biology-Physiology and Biochemistry
11105 Anatomy and Histology, General and Comparative-Surgery

BIOSYSTEMATIC CODES:
85765 Canidae

**21/9/2 (Item 2 from file: 5)**
DIALOG(R)File 5:Biosis Previews(R)

07276820 BIOSIS NO.: 000090056707
**THE BEHAVIOR OF ALLOPLASTIC TYMPANIC MEMBRANES IN STAPHYLOCOCCUS-AUREUS-INDUCED MIDDLE EAR INFECTION II. MORPHOLOGICAL STUDY OF EPITHELIAL REACTIONS**
AUTHOR: BAKKER D; VAN BLITTERSWIJK C A; HESSELING S C; DAEMS W T; GROTE J J
AUTHOR ADDRESS: EAR NOSE AND THROAT DEP., UNIVERSITY HOSP., THE NETHERLANDS.
JOURNAL: J BIOMED MATER RES 24 (7). 1990. 809-828. 1990
FULL JOURNAL NAME: Journal of Biomedical Materials Research
CODEN: JBMRB
RECORD TYPE: Abstract
LANGUAGE: ENGLISH
ABSTRACT: Epithelial reactions to Silastic, Estane polyether urethane, polypropylene oxide, and a poly(ethylene oxide hydantoin) and poly(tetramethylene terephthalate) segmented polyether polyester copolymer were investigated after **implantation** in tympanic membranes and **submucosa** of noninfected and Staphylococcus aureus-infected rat middle **ears** . Porous **implants** made of Estane and polypropylene oxide were completely covered by tympanic-membrane connective tissue, epidermis, and epithelium in 2 weeks and those made of copolymer in

between 2 and 4 weeks postoperatively. Silastic **implants** , which were dense, were not enveloped by tympanic-membrane tissue but rejected. Starting in the 6th postoperative month the proliferative-activity and structure of both the tympanic membrane epithelium and epidermis became normal except for the presence of iron-containing secretory epithelium near polypropylene oxide. After initial swelling caused by the surgical trauma, neither the proliferative activity nor the composition of the epithelium covering **submucosal implants** was affected by the presence of any of the biomaterials. Infection of middle **ears** bearing **implants** induced epithelial reactions similar to those associated with infected middle **ears** without an **implant** .

DESCRIPTORS: BACTERIA RAT MAMMAL PROSTHETIC BIOMEDICAL INSTRUMENTATION IMPLANT

CONCEPT CODES:

10506 Biophysics-Molecular Properties and Macromolecules
10508 Biophysics-Membrane Phenomena
10511 Biophysics-Bioengineering
11105 Anatomy and Histology, General and Comparative-Surgery
11107 Anatomy and Histology, General and Comparative-Regeneration and Transplantation (1971- )
20006 Sense Organs, Associated Structures and Functions-Pathology
20008 Sense Organs, Associated Structures and Functions-Deafness, Speech and Hearing
36002 Medical and Clinical Microbiology-Bacteriology
02506 Cytology and Cytochemistry-Animal
11108 Anatomy and Histology, General and Comparative-Microscopic and Ultramicroscopic Anatomy

BIOSYSTEMATIC CODES:

05510 Micrococcaceae (1979- )
86375 Muridae

BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA):

Microorganisms
Bacteria
Animals
Chordates
Vertebrates
Nonhuman Vertebrates
Mammals
Nonhuman Mammals
Rodents

**21/9/3 (Item 3 from file: 5)**

DIALOG(R)File 5:Biosis Previews(R)

06816145 BIOSIS NO.: 000088125589

***PHONOSURGICAL STUDIES FAT-GRAFT RECONSTRUCTION OF INJURED CANINE VOCAL CORDS***

AUTHOR: WEXLER D B; JIANG J; GRAY S D; TITZE I R
AUTHOR ADDRESS: DEP. OTOLARYNGOL., HEAD NECK SURGERY, UNIV. IOWA HOSP. CLINICS, IOWA CITY, IA 52242.
JOURNAL: ANN OTOL RHINOL LARYNGOL 98 (9). **1989**. 668-673. 1989
FULL JOURNAL NAME: Annals of Otology Rhinology & Laryngology
CODEN: AORHA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH
ABSTRACT: Damage to the **vocal cords** can result in scarring and impaired

vibration and can manifest clinically as hoarseness and loss of vocal power. If the vibratory characteristics could be restored in these scarred **vocal cords** , the vocal intensity and efficiency of phonation also should improve. In an effort to enhance the vibration of damaged **vocal cords** , we **implanted** a **submucosal** fat **autograft** within the injured **vocal cord** cover layer of dogs 6 weeks after unilateral mucosal excision had been performed. Three months postoperatively these animals were compared to normal dogs and those with mucosal excision but no fat- **grafting** . Acoustic and biomechanical measures of phonation were collected from an excised **larynx** preparation. We found that the fat-augmented **vocal cords** had lower threshold pressures for phonation, greater vocal intensity, and more efficient acoustic output than injured **vocal cords** without the fat- **grafting** . These results provide a foundation for further research on reconstructive surgery of damaged **vocal cords** .

DESCRIPTORS: HOARSENESS LOSS OF VOCAL POWER WOUND HEALING
CONCEPT CODES:
11107 Anatomy and Histology, General and Comparative-Regeneration and Transplantation (1971- )
12504 Pathology, General and Miscellaneous-Diagnostic
12508 Pathology, General and Miscellaneous-Inflammation and Inflammatory Disease
12512 Pathology, General and Miscellaneous-Therapy (1971- )
20006 Sense Organs, Associated Structures and Functions-Pathology
20008 Sense Organs, Associated Structures and Functions-Deafness, Speech and Hearing
10066 Biochemical Studies-Lipids
11105 Anatomy and Histology, General and Comparative-Surgery
20001 Sense Organs, Associated Structures and Functions-General; Methods
BIOSYSTEMATIC CODES:
85765 Canidae
BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA):
Animals
Chordates
Vertebrates
Nonhuman Vertebrates
Mammals
Nonhuman Mammals
Carnivores

**21/9/4 (Item 4 from file: 5)**
DIALOG(R)File 5:Biosis Previews(R)

06039017 BIOSIS NO.: 000085002166
**A COMPREHENSIVE REPAIR OF UNILATERAL CLEFT LIP IN ADULTS**
AUTHOR: KUMAR P A V
AUTHOR ADDRESS: DEP. PLASTIC SURG., JAWAHARLAL INST. POSTGRADUATE MED. EDUC. RES., PONDICHERRY, PIN. 605006, INDIA.
JOURNAL: BR J PLAST SURG 40 (5). 1987. 478-484. 1987
FULL JOURNAL NAME: British Journal of Plastic Surgery
CODEN: BJPSA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH
ABSTRACT: A comprehensive operation for primary repair of adult cleft lip is described. The technique employs pyriform fossa bone **graft, submucosal**

resection of the **nasal** septum and alar cartilage onlay **graft** in addition to a modified rotation advancement with refinements. Good results were obtained in 70% of the cases with no increase in morbidity.
DESCRIPTORS: HUMAN BONE GRAFT **NASAL** SEPTUM
CONCEPT CODES:
11107 Anatomy and Histology, General and Comparative-Regeneration and Transplantation (1971- )
12512 Pathology, General and Miscellaneous-Therapy (1971- )
18001 Bones, Joints, Fasciae, Connective and Adipose Tissue-General; Methods
19001 Dental and Oral Biology-General; Methods
19006 Dental and Oral Biology-Pathology
25552 Developmental Biology-Embryology-Descriptive Teratology and Teratogenesis
11105 Anatomy and Histology, General and Comparative-Surgery
11306 Chordate Body Regions-Facial (1970- )
BIOSYSTEMATIC CODES:
86215 Hominidae
BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA):
Animals
Chordates
Vertebrates
Mammals
Primates
Humans

**21/9/5 (Item 5 from file: 5)**
DIALOG(R)File 5:Biosis Previews(R)

03299623 BIOSIS NO.: 000072027727
**PHONO SURGERY COMBINED APPROACH PALATO PHARYNGO PLASTY**
AUTHOR: GHOSH P
AUTHOR ADDRESS: E-54, ANSARINAGAR, NEW DELHI 110016, INDIA.
JOURNAL: J LARYNGOL OTOL 94 (10). 1980 (RECD. 1981). 1165-1178. 1980
FULL JOURNAL NAME: Journal of Laryngology and Otology
CODEN: JLOTA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH
ABSTRACT: A new surgical approach (CAP, combined approach palatopharyngoplasty) is described for the correction of speech defects in palatopharyngeal incompetence. In palatopharyngeal incompetence the spatial relationships between the various components of the palatopharyngeal mechanism are disturbed. This combined approach brings about near-normal relationships (intrapalatal and palatopharyngeal), as well as providing a competent palatopharyngeal sphincter, thus offering a remarkable improvement in speech. The operation comprises a 2-stage procedure. The 1st stage includes: **submucosal transplantation** of the levator palati muscles posteriorly to the region of the uvula, and crossed palatopharyngoplasty; isolation of the palatopharyngeus muscles (posterior pillars) with their bases superiorly placed at their junctions with the soft **palate** , and **transplantation** of the lower free ends into the transverse retropharyngeal musculo-fascial pockets on the opposite side, the flaps thus crossing each other in the midline. The 2nd stage includes: check-valve palatopharyngoplasty; and elevation of a superiorly based posterior pharyngeal flap with anastomosis to the soft **palate** . The dynamics which are responsible for the improvement in speech are:

elevation of the **palate** to approximately the level of the atlas; and statico-dynamic constriction of the pharyngeal phonetic passage at the following levels: at the newly placed levator eminence, at the newly constructed dynamic sphincter situated between the above-mentioned crossing and the free margin of the soft **palate** , and at the junction of the check-valve flap with the posterior pharyngeal wall; and increase in the effective length of the soft **palate** . The phonetic stream is prevented from entering the **nasal** chambers during the utterance of non-**nasal** pressure sounds by the newly constructed 3-tier protective mechanism. This is identical with, but a reverse representation of, the normal 3-tier protective mechanism of the **larynx** , which prevents food from entering the tracheo-broncheal tree during deglutition. The operation was performed in 8 cases and the results are satisfactory, in so far as improvement in the quality of speech is better than that observed following other operations.

DESCRIPTORS: HUMAN PALATO PHARYNGEAL INCOMPETENCE MUSCLE SOFT **PALATE** **NASAL** CHAMBER TRACHEO BRONCHIAL TREE

CONCEPT CODES:

11105 Anatomy and Histology, General and Comparative-Surgery
20001 Sense Organs, Associated Structures and Functions-General; Methods
20006 Sense Organs, Associated Structures and Functions-Pathology
20008 Sense Organs, Associated Structures and Functions-Deafness, Speech and Hearing
12512 Pathology, General and Miscellaneous-Therapy (1971- )
14001 Digestive System-General; Methods
16001 Respiratory System-General; Methods
17501 Muscle-General; Methods
17506 Muscle-Pathology
19001 Dental and Oral Biology-General; Methods
19006 Dental and Oral Biology-Pathology

BIOSYSTEMATIC CODES:

86215 Hominidae

BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA):

Animals
Chordates
Vertebrates
Mammals
Primates
Humans

**21/9/6 (Item 1 from file: 73)**

DIALOG(R)File 73:EMBASE

04590784 EMBASE No: 1991084827

Nose **and paranasal augmentation: Autogenous, fascia, and cartilage**

Guerrerosantos J.
Division of Plastic, Reconstructive, and Maxillofacial Surgery, Medical College, University of Guadalajara, Garibaldi 1793, Guadalajara Mexico

Clinics in Plastic Surgery ( CLIN. PLAST. SURG. ) (United States) 1991, 18/1 (65-86)
CODEN: CPSUD ISSN: 0094-1298
DOCUMENT TYPE: Journal; Review
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

The up-to-date plastic surgeon should consider using augmentation rhinoplasty with relative frequency. In selected cases, for improving the

face integrally, it is desirable to augment the paranasal area. In the author's hands, **grafts** of cartilage and fascia are the preferred tissues, based on the experience of many years. Fascia can be used alone or combined, and in the last few years we have used it alone quite often. A temporoparietal fascia **graft** has great versatility in the correction of a number of **nasal** deformities. A depressed **nasal** dorsum can be augmented by utilizing fascia **grafts** . A depressed **nasal** radix can be corrected successfully by utilizing fascia **grafts** . **Submucosal** placement of strips of fascia has proved to be an effective method of reconstructing the roof of the middle cartilaginous vault. For augmenting the **nasal** dorsum when it is a case of primary rhinoplasty, the author prefers the use of fascia alone, but if the patient is having a secondary rhinoplasty, then the **graft** of fascia and cartilage combined is preferred.
MEDICAL DESCRIPTORS:
*autograft; * **nose** cartilage; * **nose** reconstruction
adolescent; adult; clinical article; fascia; female; human; male; osteotomy ; review; surgery
SECTION HEADINGS:
011 Otorhinolaryngology
034 Plastic Surgery

**25/6/1 (Item 1 from file: 5)**
11765620 BIOSIS NO.: 199900011729
Larynx **-preserving resection of the cervical esophagus for cervical esophageal carcinoma limited to the submucosal layer.**
1998

**25/6/5 (Item 5 from file: 5)**
05546072 BIOSIS NO.: 000083019212
**THE VALUE OF INJECTABLE COLLAGEN IN VOCAL AND GLOTTIC REHABILITATION**
1986

**25/6/9 (Item 4 from file: 73)**
04869178 EMBASE No: 1992009393
**Subtotal submucosal cricoid resection: An experimental study**
1991

**25/6/10 (Item 5 from file: 73)**
03228863 EMBASE No: 1986071440
**Management of chronic aspiration by subtotal and submucosal cricoid resection**
1985

**25/6/12 (Item 7 from file: 73)**
01901247 EMBASE No: 1981144411
**The biocompatibility of aluminium oxide implants in middle** ear **surgery**
1980

**25/9/3 (Item 3 from file: 5)**
DIALOG(R)File 5:Biosis Previews(R)
(c) 2003 BIOSIS. All rts. reserv.
10586040 BIOSIS NO.: 199699207185
**Variants of plastic reconstruction of the external** nose .
AUTHOR: Tsukerberg L I; Svistushkin V M
AUTHOR ADDRESS: Dep. Otorhinolaryngol., I.M. Sechenov Mosc. Med. Acad., Moscow**Russia

JOURNAL: Vestnik Otorinolaringologii 0 (3):p45-47 1996
ISSN: 0042-4668
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: Russian; Non-English
SUMMARY LANGUAGE: English
ABSTRACT: The operative procedure performed for marked deformity of the external **nose** includes the following stages: re-establishment of **nasal** breathing (**submucosal** resection of the **nasal** septum), plastic repair of the external **nose** (correction of scoliosis by means of mobilization of the **nasal** bones, repair of the saddle **nose** using cartilage **transplants**). Rethy method allowed optimization of the operative procedure. A simple and reliable scheme of external **nose** immobilization is outlined.
DESCRIPTORS:
MAJOR CONCEPTS: Pathology; Physiology; Respiratory System (Respiration); Sense Organs (Sensory Reception)
BIOSYSTEMATIC NAMES: Hominidae--Primates, Mammalia, Vertebrata, Chordata, Animalia
ORGANISMS: human (Hominidae)
BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA): animals; chordates; humans; mammals; primates; vertebrates
MISCELLANEOUS TERMS: CASE STUDY; MARKED DEFORMITY; **NASAL** BREATHING; PROTOCOL; RETHY METHOD; **SURGERY** OPTIMIZATION
CONCEPT CODES:
11107 Anatomy and Histology, General and Comparative-Regeneration and Transplantation (1971- )
12512 Pathology, General and Miscellaneous-Therapy (1971- )
16001 Respiratory System-General; Methods
20001 Sense Organs, Associated Structures and Functions-General; Methods
BIOSYSTEMATIC CODES:
86215 Hominidae

**25/9/6 (Item 1 from file: 73)**
DIALOG(R)File 73:EMBASE
(c) 2003 Elsevier Science B.V. All rts. reserv.
06214829 EMBASE No: 1995248661
**Use of cultured mucosal grafts to cover defects caused by vestibuloplasty: An in vivo study**
Raghoebar G.M.; Tomson A.M.; Scholma J.; Blaauw E.H.; Witjes M.J.H.; Vissink A.; Lauer G.
Dept. of Oral/Maxillofacial Surgery, University Hospital Groningen, PO Box 30.001,9700 RB Groningen Netherlands
Journal of Oral and Maxillofacial Surgery ( J. ORAL MAXILLOFAC. SURG. ) ( United States) 1995, 53/8 (872-879)
CODEN: JOMSD ISSN: 0278-2391
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
Purpose: In oral and maxillofacial surgery **palatal** mucosal **grafts** are routinely used to cover mucosal defects caused by vestibuloplasty. However, the quantity of **palatal** mucosa is a limiting factor in more extensive operations. This study investigated whether autologous cultured sheets of mucosa can serve as a dressing for these wounds. Materials and Methods: Punch biopsies (diameter, 4 mm) were taken from the hard **palate** of eight patients (five men, three women; mean age 43 years). Epithelial cells were enzymatically dissociated from these tissue specimens and grown in vitro in

the presence of a fibroblast feeder layer. Within 3 weeks, a **transplantable** epithelial sheet of about 20 cmsup 2 was obtained. The sheet was detached from the culture flask by enzyme treatment and fixed to a carrier of Vaseline (Cheeseborough Ponds Inc, Greenwich, CT) gauze. Using a split-mouth technique, the sheet was placed on half of a mucosal defect created by vestibuloplasty, while the other half of the defect was covered by a conventional split-thickness **palatal graft** . Both the cultured and conventional **graft** were held in place by the patient's relined denture fixed with perimandibular sutures. One week postsurgery, the denture and Vaseline gauze were removed. Three months after vestibuloplasty, biopsy specimens of each **grafted** site were taken and processed for light and transmission electron microscopy (LM, TEM). Results: Three months postsurgery, the **grafted** mucosa of both sites bore close resemblance to **palatal** mucosa. Both the cultured and split-thickness **grafts** were vascularized, did not evoke a **homograft** reaction, and showed a smooth **graft** /lip mucosal junction and minimal wound contraction. LM and TEM revealed that both types of **grafts** formed a fully differentiated keratinizing mucosa with a well-developed **basement membrane** and rete ridges, comparable with the histology and ultrastructure of **palatal** mucosa in situ. Conclusion: It was concluded from this study that cultured mucosa can serve as a proper dressing for mucosal defects after vestibuloplasty.
MEDICAL DESCRIPTORS:
*mouth malformation-- **surgery** -- **su** ; *oral **surgery**
adult; article; clinical article; female; hard **palate** ; human; human tissue; male; mouth mucosa; postoperative complication; **surgical** technique; tissue culture
SECTION HEADINGS:
009 Surgery
011 Otorhinolaryngology

**25/9/7 (Item 2 from file: 73)**
DIALOG(R)File 73:EMBASE
(c) 2003 Elsevier Science B.V. All rts. reserv.
05660489 EMBASE No: 1994076717
**Monobloc correction of external** nasal **deviations**
Barone C.M.; Argamaso R.V.; Sterman H.; Pelham F.; Strauch B.
Division of Plastic Surgery, University of Missouri, One Hospital Drive,Columbia, MO 65212 United States
Journal of Craniofacial Surgery ( J. CRANIOFAC. SURG. ) (United States) 1994, 5/1 (61-66)
CODEN: JSURE ISSN: 1049-2275
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
Nine patients (7 men, 2 women) with external **nasal** deviation underwent corrective procedures using a monobloc **nasal** osteotomy technique. The deformities ranged from mild to severe. Eight patients had post-traumatic deviations, whereas 1 had a unilateral cleft **nasal** deformity. For this monobloc technique, osteotomies were performed at unequal levels to correct the height difference, no periosteal undermining was performed, and septal dissection was undertaken only after monobloc repositioning. There was no need for **grafts** or microplate fixation. Minimum follow-up was 8 months. All patients had improvement in their external deviation, 1 patient was mildly undercorrected, and only 1 patient (cleft **nasal** ) required a radical **submucosal** resection.
MEDICAL DESCRIPTORS:

* **nose** malformation--congenital disorder--cn; * **nose** malformation--**surgery** -- **su** ; * **nose malformation** --etiology--et; * **surgical** approach adolescent; adult; article; clinical article; female; follow up; human; injury--etiology--et; male; osteotomy; priority journal
SECTION HEADINGS:
009 Surgery
011 Otorhinolaryngology

**25/9/11 (Item 6 from file: 73)**
DIALOG(R)File 73:EMBASE
(c) 2003 Elsevier Science B.V. All rts. reserv.
02741670 EMBASE No: 1984060629
**Spreader graft: A method of reconstructing the roof of the middle** nasal **vault following rhinoplasty**
Sheen J.H.
9201 Sunset Boulevard, Suite 814, Los Angeles, CA 90069 United States
Plastic and Reconstructive Surgery ( PLAST. RECONSTR. SURG. ) (United States) 1984, 73/2 (230-239)
CODEN: PRSUA
DOCUMENT TYPE: Journal
LANGUAGE: ENGLISH
**Submucosal** placement of strips of cartilage along the anterior border of the septum - the spreader **graft** - has proved to be an effective method for reconstructing the roof of the middle vault. It is recommended in all primary rhinoplasty patients in whom resection of the roof of the upper cartilaginous vault is a necessary part of the **surgical** plan.
MEDICAL DESCRIPTORS:
*cartilage graft
**nose** reconstruction; methodology; human; therapy; case report; cartilage
MEDICAL TERMS (UNCONTROLLED): **nose** bridge
SECTION HEADINGS:
034 Plastic Surgery
011 Otorhinolaryngology

**25/9/13 (Item 8 from file: 73)**
DIALOG(R)File 73:EMBASE
(c) 2003 Elsevier Science B.V. All rts. reserv.
00658795 EMBASE No: 1977004121
**Radical surgery of the** larynx **and laryngopharynx**
CANCER OF THE HEAD AND NECK. ICS NO. 365
Lore Jr. J.M.
Dept. Otolaryngol., State Univ. New York, Buffalo, N.Y. United States
1975, (140-152)
CODEN: BOOKA
DOCUMENT TYPE: Book
LANGUAGE: ENGLISH
It is beyond the scope of this presentation to detail all the various aspects of the indication for total **laryngectomy** and radical neck dissection, as well as the various applications of radiotherapy and chemotherapy in the treatment of carcinoma of the **larynx** and laryngopharynx. In general, removal of the entire **larynx** is indicated with **vocal cord** fixation, those lesions classified as T3 and T4, and all subglottic cancers. Some T2 cancers may require total **laryngectomy** . It is recommended that subglottic lesions, if treated surgically, have a homolateral thyroid lobectomy and isthmusectomy, paratracheal and tracheoesophageal node dissection. The basic technique of total

**laryngectomy** recommended is that which includes the major portion of the juxtaposed strap muscles. Careful evaluation of the extent of the lesion, not only by prior endoscopic examination but also careful evaluation at the time of surgery, basically involves an approach for visualization of the **larynx** , from the side opposite the gross extent of the disease. In other words, if the lesion involves the left side of the **larynx** , a contralateral approach via the right pyriform sinus or hypopharynx is utilized. By the same token, an initial transhyoid or suprahyoid exposure is contraindicated in those lesions which involve the lingual side of the epiglottis for fear of cutting into the tumor. Depending on this evaluation of the extent of the disease, a portion of the hypopharynx may require resection. When this is the case, margins of the hypopharynx should be at least 2 cm because of the **submucosal** spread of squamous cell carcinoma once it reaches the pharynx. Liberal use of frozen section to ascertain free margins is recommended. The following aspects are dealt with: total **laryngectomy** and radical neck dissection: total laryngopharyngectomy; reconstruction, and tongue flap and dermal **graft** for reconstruction of the entire hypopharynx, portion of oropharynx and cervical esophagus associated with laryngopharyngectomy. Several diagrams are included.
MEDICAL DESCRIPTORS:
* **laryngectomy** ; * **larynx cancer** ; *neck dissection; * **ear nose** throat **surgery**
therapy
SECTION HEADINGS:
011 Otorhinolaryngology
016 Cancer
009 Surgery

**25/9/14 (Item 9 from file: 73)**
DIALOG(R)File 73:EMBASE
(c) 2003 Elsevier Science B.V. All rts. reserv.
00657904 EMBASE No: 1977003230
**Sequential electron microscopic healing study of grafted** palatal **mucosa**
Weinstein R.A.; Rubinstein A.S.; Choukas N.C.
Loyola Univ. Sch. Dent., Maywood, Ill. 60153 United States
Journal of Dental Research ( J. DENT. RES. ) 1976, 55/1 (16-21)
CODEN: JDREA
DOCUMENT TYPE: Journal
LANGUAGE: ENGLISH
Human **palatal** mucosa may be glycerolized, frozen, thawed and autogenically **transplanted** with success after a storage period. Although tissue damage is observed, both at the light and electron microscopic level, this is not clinically significant. This damage is attributed to the glycerolization, freezing, and thawing process. As evidenced primarily by this ultrastructural study, regeneration of **grafted** epithelium is effected via the basal cell layer. The formation of intracytoplasmic vesicular structures and alterations in both the **basal lamina** and intercellular substances may play a significant role in the regenerative process. The electron microscope elucidated changes in regenerating cells that have not been previously observed by light microscopy. It appeared that the regeneration was almost complete 30 days posttransplantation.
MEDICAL DESCRIPTORS:
*mouth mucosa; *oral **surgery** ; *transplantation; *wound healing
methodology; therapy; electron microscopy; major clinical study; diagnosis
MEDICAL TERMS (UNCONTROLLED): **palate** mucosa
SECTION HEADINGS:

011 Otorhinolaryngology
005 General Pathology and Pathological Anatomy
001 Anatomy, Anthropology, Embryology and Histology

**25/9/15 (Item 1 from file: 144)**
DIALOG(R)File 144:Pascal

10479622 PASCAL No.: 92-0683116
**Two-stage repair of extensive subglottic tracheal stenosis**
SOMERS T; MARQUET J; OFFECIERS E
Medisch inst. Sint-Augustinus, univ. dep. oto-rhinolaryngology - head neck surgery, Wilrijk 2610, Belgium
Journal: European archives of oto-rhino-laryngology, 1990, 248 (2) 82-86
Availability: INIST-8242; 354000018209770050
No. of Refs.: 34 ref.
Document Type: P (Serial) ; A (Analytic)
Country of Publication: Federal Republic of Germany
Language: English
The authors describe an open technique that has been used over the past 25 years to reconstruct the subglottic tracheal region in two stages after extensive laryngotracheal stenosis. After **submucosal** resection of fibrous tissue and reconstruction of the subglottic and tracheal skeleton by means of two autologous osseous **grafts** , a large laryngotracheostomy is created during the initial stage. Some weeks later, in the second stage, the anterior wall is closed, using two cervical hinge-door flaps. Ten patients have undergone this procedure, with a minimum follow-up of 3 years.
English Descriptors: Stenosis; Laryngotracheal; Technique; **Surgery** ; **Larynx disease** ; Diseases of the trachea; Human; Treatment; ENT disease; Respiratory disease
Classification Codes: 002B25C01

**25/9/16 (Item 1 from file: 94)**
DIALOG(R)File 94:JICST-EPlus

02124692 JICST ACCESSION NUMBER: 95A0363477 FILE SEGMENT: PreJICST-E
**A New technique for reconstruction of the alveolar ridge with the** palatal **flap.**
OSHIMA AKIHISA (1)
(1) Runadentarukurinikku
Aichi Gakuin Daigaku Shigakkaishi(Aichi-Gakuin Journal of Dental Science), 1995, VOL.33,NO.1, PAGE.283-290
JOURNAL NUMBER: Y0095AAC ISSN NO: 0044-6912
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan
DOCUMENT TYPE: Journal
MEDIA TYPE: Printed Publication
ABSTRACT: Many **surgical** techniques have been introduced for reconstruction of the alveolar ridge. We devised a new technique using a **palatal** periosteal flap as a free **graft** to overcome the disadvantages of some procedures. The **surgical** technique: The **palatal** mucosa is incised to a certain depth and on initial **palatal** flap is made leaving a certain width of the gingiva to a certain depth as a pedicle flap. Then the underlying layer of the periosteal flap is removed as a free flap. The primary pedicle flap is then returned to its original position and sutured to obtain a primary closure. Consequently, neither the bone nor the raw surface of the donor site are left exposed. In the recepient site, the vestibular mucosa is

incised to a certain depth and extended by pushing downward. Then the bone surface is exposed by 2*1cm to prevent a relapse by removing the **submucosal** connective tissue as in the periosteal fenestration technique. The prepared **palatal** periosteal flap is **grafted** over the exposed bone surface. We have applied this technique in 12 cases to reconstruct the alveolar ridge. This technique gives the patient minimal discomfort, provides early healing of both wounds, and leaves no esthetic disturbance. (author abst.)

**26/6/7 (Item 2 from file: 73)**
03643116 EMBASE No: 1988092552
**Hydron gel implants in** vocal cords
1988

**26/6/8 (Item 3 from file: 73)**
03065349 EMBASE No: 1986256365
**The value of injectable collage in vocal and glottic rehabilitation**
1986

**26/3,K/4 (Item 4 from file: 5)**
DIALOG(R)File 5:Biosis Previews(R)
(c) 2003 BIOSIS. All rts. reserv.
07265898 BIOSIS NO.: 000090045774
**EPIGLOTTIC AUGMENTATION IN THE HORSE**
AUTHOR: TULLENERS E; MANN P; RAKER C W
AUTHOR ADDRESS: DVM, NEW BOLTON CENT., 382 WEST STREET RD., KENNETT SQUARE, PA. 19348.
JOURNAL: VET SURG 19 (3). 1990. 181-190. 1990
FULL JOURNAL NAME: Veterinary Surgery
CODEN: VESUD
RECORD TYPE: Abstract
LANGUAGE: ENGLISH
ABSTRACT: Epiglottic augmentation with injectable bovine collagen or an autogenous orallogenous **auricular** cartilage **graft** was performed in 12 horses with endoscopically and radiolographically normal epiglottises. The **grafting** procedures were easy to perform and did not cause apparent discomfort. Cartilage **graft** extrusion or resorption may have occurred, but was not seen by endoscopy and lateral **laryngeal** radiography. Only collagen **implants** remained evident endoscopically, as smooth round **submucosal** bulges ventral to the epiglottic cartilage. Two horses with collagen **implants** , and all horses with cartilage **autografts** and **allografts** , were euthanatized at week 16. One horse with a collagen **implant** was euthanatized at week 4 and one at week 6. The epiglottis appeared thickened in three horses with collagen **implants** , two horses with autogenous **grafts** , and three horses with allogenous **grafts** . Pharyngeal lymphoid tissue was hyperplastic in two horses with **autografts** and three horses with **allografts** , but not in horses with collagen **implants** . Collagen **grafts** persisted as one or two by smooth bulges 8 mm in diameter. Collagen incited a...
...that was surrounded by a fibrous connective tissue capsule. Epiglottises of the horses with collagen **implants** were significantly thicker 20 mm from the tip than those of normal horses and horses with **allografts** . Cartilage **graft** incorporation was not evident grossly and was seen on microscopic examination in only one **autograft** . Thickening was caused by **submucosal** fibrosis.
DESCRIPTORS: ENDOSCOPY **LARYNGEAL** RADIOLOGY COLLAGEN GRAFT

**26/3,K/6 (Item 1 from file: 73)**
DIALOG(R)File 73:EMBASE
(c) 2003 Elsevier Science B.V. All rts. reserv.
05800889 EMBASE No: 1994217350
**Tissue-engineered morphogenesis of cartilage and bone by means of cell transplantation using synthetic biodegradable polymer matrices**
Vacanti C.A.; Upton J.
Department of Anesthesia-White 5, Massachusetts General Hospital,Boston, MA 02114 United States
Clinics in Plastic Surgery ( CLIN. PLAST. SURG. ) (United States) 1994, 21/3 (445-462)
CODEN: CPSUD ISSN: 0094-1298
DOCUMENT TYPE: Journal; Review
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
...cells onto synthetic biocompatible, biodegradable polymers of different chemical compositions and physical configurations, and then **transplanting** these polymers into animals. The synthetic scaffolds act as a **basement membrane** providing for structural cues and enabling nutrition by diffusion until **grafting** occurs. The development of this field since its inception as well as several potential applications...
MEDICAL DESCRIPTORS:
articular cartilage; biodegradation; bioengineering; bone remodeling; **ear** reconstruction; extracellular matrix; morphogenesis; nonhuman; nude mouse; rabbit; review

**26/3,K/9 (Item 4 from file: 73)**
DIALOG(R)File 73:EMBASE
(c) 2003 Elsevier Science B.V. All rts. reserv.
02089842 EMBASE No: 1982192938
**Repair of a subglottic stenois by submucosal resection**
Steensen S.H.; Petersen J.W.
ENT Dept. Munic. Hosp., Copenhagen Denmark
Journal of Laryngology and Otology ( J. LARYNGOL. OTOL. ) (United Kingdom ) 1982, 96/5 (469-471)
CODEN: JLOTA
DOCUMENT TYPE: Journal
LANGUAGE: ENGLISH
A subglottic, intralaryngeal stenosis in a 5 year old boy was successfully removed by microsurgical **submucosal** resection. The method reported provides adequate subglottic augmentation and interferes with the **laryngeal** cartilage only minimally. The use of small split-thickness skin **grafts** for lining material is advocated, as they take immediately and reduce the time for stenting. At follow-up, no recurrent stenosis has developed and the site of the skin **grafts** has been lined with ciliated mucosa. Post-operative hospitalization was considered to be acceptably short.
MEDICAL DESCRIPTORS:
*intubation; * **larynx** stenosis
upper respiratory tract obstruction; case report; **larynx** ; respiratory system

**26/3,K/11 (Item 6 from file: 73)**
DIALOG(R)File 73:EMBASE
(c) 2003 Elsevier Science B.V. All rts. reserv.
00649155 EMBASE No: 1976204828

**Histological examinations of ingrowing of free oral mucous grafts in the** larynx
HISTOLOGISCHE UNTERSUCHUNGEN UBER DIE EINHEILUNG FREIER MUNDSCHLEIMHAUT TRANSPLANTATE IM GLOTTISBEREICH
Neumann O.G.
Germany
Archives of Oto-Rhino-Laryngology ( ARCH. OTO-RHINO-LARYNGOL. ) 1975, 210/2 (244-246)
CODEN: AORLC
DOCUMENT TYPE: Journal
LANGUAGE: GERMAN
In more than 50 cases of **grafting** free oral mucous flaps for glottic reconstruction no clinical results of healing were found. From different patients biopsies of oral mucous **grafted vocal cords** had been taken after 3 wk, 3, 9, 15, 16 mth. In several microphotographs it is shown that the mucous of the **grafts** as good as the adjoining mucous of the **larynx** has not changed the original structure. In the covered muscle and the **submucosal** elastic elements there cannot be found any important sign of degeneration or cicatrization.
MEDICAL DESCRIPTORS:
* **larynx** ; *papillomatosis

**26/3,K/15 (Item 10 from file: 73)**
DIALOG(R)File 73:EMBASE
(c) 2003 Elsevier Science B.V. All rts. reserv.
00199839 EMBASE No: 1974189982
**A simple technique for plastic closure of large septal perforations**
EIN EINFACHES VERFAHREN ZUM PLASTISCHEN VERSCHLUSS GROSSER SEPTUMPERFORATIONEN
Koburg E.
Germany
ARCH.KLIN.EXP.OHR.NAS.KEHLK.HEILK. 1973, 205/2 (289-291)
CODEN: AKONA
DOCUMENT TYPE: Journal
LANGUAGE: GERMAN
...a simple method for the repair of septal perforation which consists of: formation of a **submucosal** pocket proximal to the perforation, introduction of a skin **graft** folded on itself, with raw surfaces on both sides into the pocket, and incision comprising...
MEDICAL DESCRIPTORS:
* **nose** reconstruction; * **nose** septum; * **nose** septum perforation

**26/3,K/16 (Item 11 from file: 73)**
DIALOG(R)File 73:EMBASE
(c) 2003 Elsevier Science B.V. All rts. reserv.
00167646 EMBASE No: 1974157770
**Complications and other sequelae of functional and corrective** nasal **surgery**
COMPLICANZE ED ESITI NELLA CHIRURGIA FUNZIONALE E CORRETTIVA DEL NASO
Fruttero F.
Clin. ORL, Univ. Torino Italy
Minerva Otorinolaringologica ( MINERVA OTORINOLARINGOL. ) 1973, 23/3 (138-143)
CODEN: MIOTA
DOCUMENT TYPE: Journal
LANGUAGE: ITALIAN

Various aspects of the physiopathology of the **nasal** passages are described and complications arising intra and post operatively in functional and plastic management of the **nose** are explained. These include: haemorrhage, hard oedema, hyperostosis, **graft** necrosis, infection, decubitus lesions, frontal sinus lesions, lesions of the lamina cribosa and lacrimal, perforations, and cosmetically unsatisfactory results following **submucosal** resection of the septum. Attention is also given to anosmia and respiratory insufficiency as possible, though rare, complications arising after operations designed to improve the cosmetic appearance of the **nasal** bridge.
MEDICAL DESCRIPTORS:
*anosmia; *bleeding; *edema; * **nose** reconstruction
MEDICAL TERMS (UNCONTROLLED): saddle **nose**

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File  98:General Sci Abs/Full-Text 1984-2003/Jun
File   9:Business & Industry(R) Jul/1994-2003/Aug 12
File  16:Gale Group PROMT(R) 1990-2003/Aug 13
File 160:Gale Group PROMT(R) 1972-1989
File 148:Gale Group Trade & Industry DB 1976-2003/Aug 13
File 441:ESPICOM Pharm&Med DEVICE NEWS 2003/Aug W2
File 621:Gale Group New Prod.Annou.(R) 1985-2003/Aug 13
File 149:TGG Health&Wellness DB(SM) 1976-2003/Jul W4
File 636:Gale Group Newsletter DB(TM) 1987-2003/Aug 13
File  20:Dialog Global Reporter 1997-2003/Aug 13
File 444:New England Journal of Med. 1985-2003/Aug W3
Set     Items   Description
S1       5460   SUBMUCOSA? ? OR (BASEMENT OR HYALINE)()MEMBRANE? ? OR (BAS-
            AL OR BASEMENT)()LAMINA? ?
S2      34448   VOCAL()(CORD? ? OR FOLD? ?) OR LARYNX OR LARYNGE? OR PALAT-
            E? ? OR PALATAL
S3     389328   NASAL OR NOSE OR AURICULA? ? OR EAR OR EARS
S4        548   (HEAD OR NECK)(2N)TISSUE
S5     110281   GRAFT? OR HOMOGRAFT? OR HETEROGRAFT? OR ALLOGRAFT? OR AUTO-
            GRAFT?
S6     296398   IMPLANT? OR TRANSPLANT?
S7         56   S1(3N)S5:S6
S8     761023   SURGERY OR SURGICAL
S9          1   S2:S4(S)S7
S10       258   S1(S)S5:S6 NOT S7
S11         9   S2:S4(S)S10
S12         9   S11 NOT S9
S13         7   RD (unique items)
S14         3   S13/1999:2003
S15         4   S13 NOT S14

 9/7/1     (Item 1 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)
(c) 2003 The Gale Group. All rts. reserv.
01316011    Supplier Number: 41522229  (THIS IS THE FULLTEXT)
Behaviour of alloplastic tympanic membranes in staphylococcus
 aureus-induced middle ear infection. II. Morphological study of
 epithelial reactions.
Biomedical Materials, pN/A
Sept, 1990
TEXT:
Epithelial reactions to Silastic, Estane polyether urethane, polypropylene
oxide, and a poly(ethylene oxide hydantoin) and poly(tetramethylene
terephthalate) segmented polyether polyester copolymer were investigated
after implantation in tympanic membranes and submucosa of non-infected and
Staphylococcus aureus-infected rat middle ears . After initial swelling
caused by the surgical trauma, neither the proliferative activity nor the
composition of the epithelium covering submucosal implants was found to
be affected by the presence of any of the biomaterials. (Bakker D. et al,
J.Biomed. Mat. Res., 24, 7, 1990, p. 809-28; University Hospital, Leiden,
The Netherlands.)
```

**15/3,AB,K/1 (Item 1 from file: 16)**
DIALOG(R)File 16:Gale Group PROMT(R)

04599551 Supplier Number: 46763988
***Autologous tissue can improve graft safety***
Ophthalmology Times, p12
Oct 1, 1996
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 872
... when harvesting hard palate mucosa grafts. (Figures 1A and 1B)
The mucosa of the hard **palate** consists of a stratified squamous epithelium, with variable degrees of keratinization, resting on a collagenous lamina propria (Figure 2). The hard **palate** sub-mucosa consists of a richly innervated and vascularized loose, fatty connective tissue. Beneath the **submucosa** is the periosteum of the hard **palate** . Dissection of a hard **palate** **graft** should proceed in the **submucosal** plane, leaving the periosteum undisturbed.
Surgical technique
The procedure can be performed under general or...
...and then balloon the mucosa from the underlying periosteum. This turns the normally pink hard **palate** mucosa white. A scalpel blade is used to incise the mucosal area demarcated (Figure 3), followed by dissection in a **submucosal** plane to remove the **graft** . Care must be taken to avoid deep dissection to the periosteum as this can delay...

**15/3,AB,K/2 (Item 1 from file: 149)**
DIALOG(R)File 149:TGG Health&Wellness DB(SM)

01619731 SUPPLIER NUMBER: 18306605 (USE FORMAT 7 OR 9 FOR FULL TEXT)
**Cystic fibrosis in adults: from researcher to practitioner.**
Marelich, Gregory P.; Cross, Carroll E.
The Western Journal of Medicine, v164, n4, p321(14)
April, 1996
PUBLICATION FORMAT: Magazine/Journal ISSN: 0093-0415 LANGUAGE: English
RECORD TYPE: Fulltext; Abstract TARGET AUDIENCE: Professional
WORD COUNT: 13175 LINE COUNT: 01133
AUTHOR ABSTRACT: The Cystic Fibrosis Foundation currently tracks about 20,000 Americans with cystic fibrosis, an autosomal recessive genetic disease that leads to multisystem complications. With the institution of better therapeutic regimens over the past 2 decades, more patients with this disease are surviving to adulthood. Within the past decade, both clinical and basic science research in the field of cystic fibrosis has progressed at a rapid rate. The intent of this review is to introduce readers to the molecular, cellular, and systemic disorders of this disease. We discuss treatment strategies involving antibiotics, nutrition, immune-response mediators, chest physiotherapy, and sputum-active agents with respect to the airway dysfunction of cystic fibrosis. Other common complications, recent developments, transplantation, and gene therapy are also reviewed.
...**Submucosal** glands are the predominant site of CFTR expression in the human bronchus...1992...
...Bavaria JE, Kaiser LR, Wilson JM, Albelda SM: Adenovirus-mediated gene transfer to human bronchial **submucosal** glands using xenografts. Am J

Physiol 1995; 268:L657-L665 [141.] Yei S, Mittereder N...

```
File 350:Derwent WPIX 1963-2003/UD,UM &UP=200351
File 347:JAPIO Oct 1976-2003/Apr(Updated 030804)
File 371:French Patents 1961-2002/BOPI 200209
Set     Items   Description
S1        558   SUBMUCOSA? ? OR (BASEMENT OR HYALINE)()MEMBRANE? ? OR (BAS-
            AL OR BASEMENT)()LAMINA? ?
S2       4016   VOCAL()(CORD? ? OR FOLD? ?) OR LARYNX OR LARYNGE? OR PALAT-
            E? ? OR PALATAL
S3      58408   NASAL OR NOSE OR AURICULA? ? OR EAR OR EARS
S4        183   (HEAD OR NECK)(2N)TISSUE
S5      56857   GRAFT? OR HOMOGRAFT? OR HETEROGRAFT? OR ALLOGRAFT? OR AUTO-
            GRAFT?
S6     154785   IMPLANT? OR TRANSPLANT?
S7      10521   IC=A61L-027
S8      26812   IC=A61F-002
S9       4173   S8 AND S7
S10        93   S1(S)S5:S6
S11         7   S2:S3 AND S10
S12         1   S4 AND S10
S13         8   S11:S12
S14         2   S9 AND S13 [duplicates]
S15         6   S13 NOT S14
S16        12   S1 AND S2:S4 AND S5:S6
S17         4   S16 NOT S13

 15/34/1      (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2003  Thomson Derwent. All rts. reserv.
015168712
WPI Acc No: 2003-229240/200322
```

***Preparation of submucosal xenograft for implantation into human for replacing defective human tissue, involves removing portion of submucosa from non-human animal, washing and digesting with glycosidase***

```
Patent Assignee: CROSSCART INC (CROS-N); STONE K R (STON-I)
Inventor: STONE K R
Number of Countries: 089  Number of Patents: 001
Patent Family:
Patent No      Kind   Date     Applicat No     Kind   Date      Week
WO 200289711   A1  20021114  WO 2002US12295  A   20020418  200322  B
Priority Applications (No Type Date): US 2001289328 P 20010507
Patent Details:
Patent No  Kind Lan Pg   Main IPC     Filing Notes
WO 200289711  A1 E  23 A61F-002/38
   Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN
   CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ
   LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK
   SL TJ TM TR TT UA UG US UZ VN YU ZA ZW
   Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
   IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW
Abstract (Basic): WO 200289711 A1
        NOVELTY - Preparing a submucosal xenograft for implantation
    into human, involves removing submucosal from non-human animal to
    provide the xenograft, washing in water and alcohol, subjecting to
    cellular disruption treatment and digesting with glycoside to remove
    surface carbohydrate groups from the xenograft. The xenograft is
    non-immunogenic and has same mechanical properties as native soft
```

tissue.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

(1) an article, which comprises a substantially non-immunogenic **submucosal** xenograft for **implantation** into human body; and

(2) a **submucosal** xenograft tissue for **implantation** into human, which comprises a portion of **submucosal** tissue from non-human animal. The portion includes extracellular component(s) and dead cell(s) having no surface- galactosyl groups. The xenograft tissue is non-immunogenic in a primate.

USE - For replacement and repair of defective human tissue. The xenograft is useful in urinary incontinence, large or chronic dermal injuries and has other applications such as an adhesion barrier, as an organ patch, hemostatic plug, in treating cleft **palate** , normal wound care etc.

ADVANTAGE - The xenograft is non-immunogenic and has elasticity, load bearing capacity and mechanical properties as a portion of native soft tissue. The xenograft further has significant structure, and holding strength.

pp; 23 DwgNo 0/0

Technology Focus:

TECHNOLOGY FOCUS - INSTRUMENTATION AND TESTING - Preferred Process: The disruption treatment involves freeze/thaw cycling and exposure to gamma radiation. The xenograft is prepared from peptidoglycan(s) by digesting the xenograft with proteoglycan depleting factor such as chondroitinase ABC, hyaluronidase, chondroitin AC II lyase, keratanase, trypsin and/or fibronectin fragment. The method further involves piercing the xenograft, treating the xenograft with at least one enzyme, anticalcification agents, antithrombotic agents, antibiotics and/or growth factors, sterilizing the xenograft and treating the xenograft with cross-linking agent and polyethylene glycol.

BIOLOGY - Preferred Components: The glycosidase is alpha-galactosidase. The enzyme is officin or trypsin. The sterilizing agent is ethylene oxide or propylene oxide. The cross-linking agent is aldehyde, aromatic diamines, carbodiimides, diisocyanates or glutaraldehyde (0.01-5 % glutaraldehyde). The cross-linking agent is in vapor form. The xenograft tissue is excised from the jejunum of warm blooded vertebrate. The portion is segment of small intestine such as tunical submucosa, muscularis mucosa, and striatum compactum of the tunica mucosa. The portions are delaminated from the tunical muscularis and luminal portion of the tunical mucosa. The portion of the ligament has a second block bone affixed to the second end and the opposite portion to the first end.

Derwent Class: A96; B07; D16; D21; D22; E13; E17; P32
International Patent Class (Main): A61F-002/38
International Patent Class (Additional): A61F-002/28; A61F-002/30

**15/34/2 (Item 2 from file: 350)**

DIALOG(R)File 350:Derwent WPIX

015053372
WPI Acc No: 2003-113888/200311

**Membrane useful for promoting healing of mucosa injury, comprising purified collagen material derived from natural collagen-containing tissue**

Patent Assignee: GEISTLICH SOEHNE CHEM IND AG E (GEIS ); BOYNE P J (BOYN-I); GEISTLICH P (GEIS-I); SCHLOESSER L (SCHL-I)

Inventor: BOYNE P J; GEISTLICH P; SCHOESSER L; SCHLOESSER L
Number of Countries: 032 Number of Patents: 007
Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week | |
|---|---|---|---|---|---|---|---|
| EP 1252903 | A1 | 20021030 | EP 2002252970 | A | 20020426 | 200311 | B |
| AU 200235618 | A | 20021031 | AU 200235618 | A | 20020424 | 200311 | |
| CA 2383636 | A1 | 20021027 | CA 2383636 | A | 20020426 | 200311 | |
| US 20020160036 | A1 | 20021031 | US 2001286531 | P | 20010427 | 200311 | |
| | | | US 2002128525 | A | 20020424 | | |
| JP 2003010313 | A | 20030114 | JP 2002125350 | A | 20020426 | 200316 | |
| CN 1383897 | A | 20021211 | CN 2002118498 | A | 20020427 | 200324 | |
| CZ 200201479 | A3 | 20030416 | CZ 20021479 | A | 20020426 | 200336 | |

Priority Applications (No Type Date): US 2001286531 P 20010427; US 2002128525 A 20020424
Patent Details:

| Patent No | Kind | Lan | Pg | Main IPC | Filing Notes |
|---|---|---|---|---|---|
| EP 1252903 | A1 | E | 9 | A61L-027/24 | |
| Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR | | | | | |
| AU 200235618 | A | | | A61L-027/60 | |
| CA 2383636 | A1 | E | | A61K-038/39 | |
| US 20020160036 | A1 | | | A61K-038/39 | Provisional application US 2001286531 |
| JP 2003010313 | A | | 20 | A61L-031/00 | |
| CN 1383897 | A | | | A61L-015/32 | |
| CZ 200201479 | A3 | | | A61L-027/24 | |

Abstract (Basic): EP 1252903 A1

NOVELTY - A membrane comprises a purified collagen material derived from natural collagen-containing tissue.

ACTIVITY - Vulnerary.

MECHANISM OF ACTION - None given in the source material.

USE - In the manufacture of membrane for promoting mucosa regeneration by covering an area of mucosa injury with the membrane (claimed) and for promoting healing of mucosa injury (particularly oral mucosa injury).

ADVANTAGE - The membrane biodegrades without an adverse inflammatory response, promotes regeneration of mucosa in any part of the body having damaged mucosal tissue and is technically feasible in surgical manipulation and exhibits tolerance to suturing. The material could also be used as a substitute for free mucosal grafts or split thickness skin grafts in maintaining the vestibular height and in the restoration of attached mucosa in the area of root form implants.

pp; 9 DwgNo 0/3

Technology Focus:

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Component: The membrane has a thickness of 0.5 - 5 mm and comprises a barrier layer (preferably collagen I and/or collagen III) including an outer smooth barrier face and a fibrous face opposite to the smooth barrier face. The membrane comprises a multi-layer sheet of collagen material adhered to the fibrous face, and the matrix layer comprises collagen I, II, III, IV and/or VII (preferably collagen I or II). The membrane carries at least one mucosa-regenerating growth factor selected from epidermal growth factor (EGF), insulin-like growth factor (IGF-1), fibroplast growth factor (beta-FGF), platelet-derived growth factor (PDGF) and/or transforming growth factor (TGF-beta).

Extension Abstract:

EXAMPLE - A membrane material was prepared from porcine Type I and

Type III collagen manufactured in two layers, and was placed and secured to the margins of a host mucosal surface with 4-0 monofilament nylon interrupted sutures. Biopsies of the vestibular surgical sites were made at the end of 3 and 6 weeks. At 3 weeks, a biopsy on one side (2 quadrants) of each animal was made to extend the superior native residual host mucosal surface across the surface of membrane material to the opposite inferior graft host margin. The biopsy area was closed with interrupted sutures and allowed to heal. Biopsies of the attached mucosal area were similarly taken: one side at 3 weeks and one side of each animal at 6 weeks for a total of 3 specimens for each period. The sutures in all cases were removed on the 14th post operative day.

There was no clinical evidence of inflammation or infection and no sloughing of the membrane material. The membrane remained in place and the margins indicated gradual re-epithelization from the host mucosal peripheral surfaces. The biopsies at the end of 3 weeks showed re-epithelization of the margins with normal rete peg formation. In the 6 week specimens, there was an excellent mucosal surface developed completely across the patched area with evidence of neoangiogenesis submucosally and a normal stratified squamous epithelial formation in evidence with a complete excision and biopsy of the patched area. New attached mucosa could be seen in all of the specimens on the **palatal** surface, on the alveolar ridge crest, and on the buccal aspect of the alveolar ridge. Very small area of residual collagen could be seen beneath the surface epithelium. There was evidence of complete acceptance of the membrane material and excellent re-reformation of attached mucosa.

On the basis of these tests, it was conducted that collagen membrane as a patch was an excellent substitute for autogenous soft tissue **grafts** . There was no evidence of either scarring or prolonged inflammatory response or any evidence of **submucosal** fibrosis, which sometimes occurred.

Derwent Class: B04; D22; P34
International Patent Class (Main): A61K-038/39; A61L-015/32; A61L-027/24; A61L-027/60; A61L-031/00
International Patent Class (Additional): A61K-009/70; A61K-038/18; A61K-038/22; A61L-026/00; A61L-027/36

**17/34/1 (Item 1 from file: 350)**
DIALOG(R)File 350:Derwent WPIX

014583072 **Image available**
WPI Acc No: 2002-403776/200243

***Lateral stiffening snoring treatment method involves linking right and left side locations of soft palate by submucosal linkage of stiffness greater than stiffness of untreated tissue between locations***

Patent Assignee: PI MEDICAL INC (PIME-N); RESTORE MEDICAL INC (REST-N)
Inventor: CONRAD T R; KNUDSON M B; METZGER A K; STEVENS W J; WALTER L A
Number of Countries: 102 Number of Patents: 003
Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week |
|---|---|---|---|---|---|---|
| US 20020035994 | A1 | 20020328 | US 99398991 | A | 19990917 | 200243 B |
| | | | US 99434653 | A | 19991105 | |
| | | | US 2000513039 | A | 20000225 | |
| | | | US 2000513432 | A | 20000225 | |
| | | | US 2000602141 | A | 20000623 | |
| | | | US 2000636803 | A | 20000810 | |

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|---|---|---|---|---|---|---|---|
| | | | US 2001814460 | A | 20010321 | | |
| | | | US 2001992277 | A | 20011114 | | |
| US 6502574 | B2 | 20030107 | US 99398991 | A | 19990917 | 200306 | |
| | | | US 99434653 | A | 19991105 | | |
| | | | US 2000513039 | A | 20000225 | | |
| | | | US 2000513432 | A | 20000225 | | |
| | | | US 2000602141 | A | 20000623 | | |
| | | | US 2000636803 | A | 20000810 | | |
| | | | US 2001814460 | A | 20010321 | | |
| | | | US 2001992277 | A | 20011114 | | |
| WO 200341612 | A2 | 20030522 | WO 2002US36492 | A | 20021113 | 200344 | |

Priority Applications (No Type Date): US 2001992277 A 20011114; US 99398991 A 19990917; US 99434653 A 19991105; US 2000513039 A 20000225; US 2000513432 A 20000225; US 2000602141 A 20000623; US 2000636803 A 20000810 ; US 2001814460 A 20010321

Patent Details:

| Patent No | Kind | Lan | Pg | Main IPC | Filing Notes |
|---|---|---|---|---|---|
| US 20020035994 | A1 | | 15 | A61F-005/56 | CIP of application US 99398991 |
| | | | | | CIP of application US 99434653 |
| | | | | | CIP of application US 2000513039 |
| | | | | | CIP of application US 2000513432 |
| | | | | | CIP of application US 2000602141 |
| | | | | | CIP of application US 2000636803 |
| | | | | | CIP of application US 2001814460 |
| | | | | | CIP of patent US 6250307 |
| US 6502574 | B2 | | | A61F-005/56 | CIP of application US 99398991 |
| | | | | | CIP of application US 99434653 |
| | | | | | CIP of application US 2000513039 |
| | | | | | CIP of application US 2000513432 |
| | | | | | CIP of application US 2000602141 |
| | | | | | CIP of application US 2000636803 |
| | | | | | CIP of application US 2001814460 |
| | | | | | CIP of patent US 6250307 |
| WO 200341612 | A2 | E | | A61F-000/00 | |

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW

Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SK SL SZ TR TZ UG ZM ZW

Abstract (Basic): US 20020035994 A1

NOVELTY - The locations on the right and left sides of a soft **palate** (SP), separated by an anterior-posterior midline, are linked by a **submucosal** linkage of stiffness greater than the stiffness of untreated tissue between the locations.

USE - For treating snoring by lateral stiffening of soft **palate** using **implants** such as modular **implant** , elongated **implant** , braided **implant** , expandable **implant** , sheet **implant** , particulate **implant** , radio frequency ablation, sclerosing agent.

ADVANTAGE - The right and left sides of the patient's **palate** are linked by a simple technique.

DESCRIPTION OF DRAWING(S) - The figure shows a side sectional view of human head showing soft **palate** and adjacent anatomical features.

pp; 15 DwgNo 1/20

Derwent Class: A96; D22; P32

International Patent Class (Main): A61F-000/00; A61F-005/56

**17/34/3 (Item 3 from file: 350)**
DIALOG(R)File 350:Derwent WPIX

011822301
WPI Acc No: 1998-239211/199821
***Cell-scaffold composition, for growing cartilage in vivo - comprises a three-dimensional scaffold of biodegradable, synthetic polymer fibres and cartilage-producing cells attached to fibre surface***
Patent Assignee: CHILDRENS MEDICAL CENT (CHIL-N); MASSACHUSETTS INST TECHNOLOGY (MASI )
Inventor: LANGER R S; VACANTI C A; VACANTI J P
Number of Countries: 001 Number of Patents: 001
Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week | |
|---|---|---|---|---|---|---|---|
| US 5736372 | A | 19980407 | US 86933018 | A | 19861120 | 199821 | B |
| | | | US 87123579 | A | 19871120 | | |
| | | | US 89339155 | A | 19890417 | | |
| | | | US 90509952 | A | 19900416 | | |

Priority Applications (No Type Date): US 90509952 A 19900416; US 86933018 A 19861120; US 87123579 A 19871120; US 89339155 A 19890417
Patent Details:

| Patent No | Kind | Lan | Pg | Main IPC | Filing Notes |
|---|---|---|---|---|---|
| US 5736372 | A | | 17 | C12N-011/08 | CIP of application US 86933018 |
| | | | | | CIP of application US 87123579 |
| | | | | | CIP of application US 89339155 |
| | | | | | CIP of patent US 5041138 |

Abstract (Basic): US 5736372 A

The following are claimed: (A) a cell-scaffold composition for growing cells to produce a functional cartilaginous structure in vivo, comprising: (a) a fibrous three-dimensional scaffold, which is composed of fibres of a biodegradable, synthetic polymer, and (b) cartilage-producing cells, which are attached to the surface of the fibres of the scaffold, and which are attached uniformly throughout the scaffold. The fibres are spaced apart, so that the average interfibre distance is 100-300 mu m. The fibres provide sufficient surface area to allow attachment of a density of cells which is sufficient to produce the functional cartilaginous structure in vivo. Diffusion in the scaffold provides free exchange of nutrients, gases and waste to and from the cells, so that cell viability can be maintained throughout the scaffold prior to formation of the functional cartilage in vivo; (B) a cell-scaffold composition comprising: (a) a fibrous three-dimensional scaffold, which is composed of fibres of a synthetic polymer, and (b) cartilage-producing cells, which are attached to the surface of the fibres of the scaffold, and which are attached uniformly throughout the scaffold. The fibres are separated by a distance sufficient to allow (i) multiple layers of cells to adhere to the surface of the fibres and (ii) to provide free exchange (by diffusion) of nutrients and waste to the attached cells, when the cells on the scaffold are cultured in a nutrient medium. The scaffold is in the form of an **ear** , a **nose** , or a component of an **ear** or a **nose** .

The polymer is a polyanhydride, polyorthoester, polyglycolic acid, polylactic acid and/or their copolymer. The scaffold is formed from a combination of biodegradable and non-biodegradable materials. The non-biodegradable material is polytetrafluoroethylene, nylon, ethylene

vinyl acetate and/or a polyester. The composition also comprises a coating on the fibres. The coating is a **basement membrane** component, agar, agarose, gelatin, a glycosaminoglycan a collagen, gum arabic, fibronectin, laminin, hyaluronic acid and/or an attachment peptide. The cells are chondrocyte cells, fibroblast cells capable of differentiation into chondrocytes, or bone precursor cells capable of differentiation into chondrocytes.

USE - The cell scaffold compositions may be used for production of joint relinings, growth of elastic cartilage for plastic or reconstructive replacement of cartilage structures (e.g. the **ear** or the **nose** ), or for repair of large bone defects.

ADVANTAGE - The compositions can be cast or molded into desired shapes, or can be manipulated at the time of **implantation** . The cells can retain their normal morphology and cell function.

Dwg.0/10

Derwent Class: A96; B04; D16; D22; P32
International Patent Class (Main): C12N-011/08
International Patent Class (Additional): A61F-002/18; A61F-002/28; C12N-005/00

**17/34/4 (Item 4 from file: 350)**

DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.
008461275
WPI Acc No: 1990-348275/199046

***Formation of cartilage structures - by attaching chondrocyte cells to biocompatible matrix in nutrient environment***

Patent Assignee: LANGER R S (LANG-I); VACANTI C A (VACA-I); VACANTI J P (VACA-I); CHILDRENS MEDICAL CENT (CHIL-N); MASSACHUSETTS INST TECHNOLOGY (MASI ); CHILDRENS HOSP BOSTON (CHIL-N); CHILDRENS MEDICAL CENTER CORP (CHIL-N); CHILDRENS HOSP ROSTON (CHIL-N)
Inventor: LANGER R S; VACANTI C A; VACANTI J P
Number of Countries: 020 Number of Patents: 011
Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week | |
|---|---|---|---|---|---|---|---|
| WO 9012603 | A | 19901101 | | | | 199046 | B |
| AU 9055568 | A | 19901116 | | | | 199107 | |
| US 5041138 | A | 19910820 | US 89339155 | A | 19890417 | 199136 | |
| EP 469070 | A | 19920205 | EP 90907835 | A | 19900416 | 199206 | |
| JP 4505717 | W | 19921008 | JP 90507077 | A | 19900416 | 199247 | |
| | | | WO 90US2091 | A | 19900416 | | |
| AU 635025 | B | 19930311 | AU 9055568 | A | 19900416 | 199317 | |
| JP 94006155 | B2 | 19940126 | JP 90507077 | A | 19900416 | 199407 | |
| | | | WO 90US2091 | A | 19900416 | | |
| EP 469070 | B1 | 19960911 | EP 90907835 | A | 19900416 | 199641 | |
| | | | WO 90US2091 | A | 19900416 | | |
| CA 2051663 | C | 19960806 | CA 2051663 | A | 19900416 | 199642 | |
| DE 69028524 | E | 19961017 | DE 628524 | A | 19900416 | 199647 | |
| | | | EP 90907835 | A | 19900416 | | |
| | | | WO 90US2091 | A | 19900416 | | |
| ES 2095252 | T3 | 19970216 | EP 90907835 | A | 19900416 | 199714 | |

Priority Applications (No Type Date): US 89339155 A 19890417; US 86933018 A 19861120; US 87123579 A 19871120
Cited Patents: EP 282746; EP 339607; US 4553272; US 4846835; WO 8803785; WO 8900413; 3.Jnl.Ref
Patent Details:

| Patent No | Kind | Lan | Pg | Main IPC | Filing Notes |
|---|---|---|---|---|---|
| WO 9012603 | A | | 45 | | |
| Designated States (National): AU CA FI JP KR NO | | | | | |
| Designated States (Regional): AT BE CH DE DK ES FR GB IT LU NL SE | | | | | |
| EP 469070 | A | | | | |
| Designated States (Regional): AT BE CH DE ES FR GB IT LI LU NL SE | | | | | |
| JP 4505717 | W | | 45 | A61L-027/00 | Based on patent WO 9012603 |
| AU 635025 | B | | | A61L-027/00 | Previous Publ. patent AU 9055568<br>Based on patent WO 9012603 |
| JP 94006155 | B2 | | | A61L-027/00 | Based on patent JP 4505717<br>Based on patent WO 9012603 |
| EP 469070 | B1 | E | 22 | A61L-027/00 | Based on patent WO 9012603 |
| Designated States (Regional): AT BE CH DE DK ES FR GB IT LI LU NL SE | | | | | |
| CA 2051663 | C | | | C12N-011/00 | |
| DE 69028524 | E | | | A61L-027/00 | Based on patent EP 469070<br>Based on patent WO 9012603 |
| ES 2095252 | T3 | | | A61L-027/00 | Based on patent EP 469070 |

Abstract (Basic): WO 9012603 A

A system for growing a cartilaginous structure is claimed comprising a biocompatible matrix in a nutrient environment and chondrocyte cells attached to the matrix, where the matrix is structured to provide free exchange of nutrients and waste to the attached cells in the absence of vascularisation. The matrix may be formed from eg. polyanhydrides, polyorthoesters, polyglycolic acids, polylactic acids, collagen, teflon, nylon, ethylene vinyl acetate or polyesters. The matrix may be coated with eg. **basement membrane** components, agar, agarose, gelatin, gum arabic, collagens, fibronectin, laminin, hyaluronic acid, glycosaminoglycans or attachment peptides.

Also claimed is a method for making a cartilaginous structure by providing a bicompatible matrix in a nutrient environment and attaching cartilage cells to the matrix.

USE/ADVANTAGE - The matrices can be formed of the required shape and flexibility for reconstructive and plastic surgery and are able to produce high cell densities. They can be used in vivo for eg. the growth of hyaline cartilage for joint relinings, the growth of elastic cartilage for plastics or reconstructive replacement of cartilage structures or repair of large bone defects. They can also be used for the prodn. of bioactive molecules in vitro, eg. proteinase inhibitors and collagenase inhibitors.

Dwg.0/10

Abstract (Equivalent): EP 469070 B

Use of a biocompatible synthetic polymeric matrix, the matrix being formed of fibres or a fibrous mesh and made from either a non-degradable material or a biodegradable material which degrades by hydrolysis or a combination thereof and chondrocytes, fibroblasts or bone-precursor cells attached to the matrix, wherein the matrix is structured to provide free exchange of nutrients and waste to the attached said cells in the absence of vascularisation in the manufacture of a cartilaginous structure or surface, ora bone structure, for **implantation** in, or addition to, a patient, wherein the said matrix is formed into a desired shape of a cartilate structure or surface or for repair of a bone defect in the said patient.

(Dwg.0/10

Abstract (Equivalent): US 5041138 A

Process for replacing or repairing cartilage structures comprises immobilising living cells on a rigid or flexible biocompatible, biodegradable synthetic polymer matrix, pref. coated with membrane components;proliferation of the cells in vitro; and **implantation**. Cells which propagate under these

conditions are cartilage, bone, skin and nerve cells. USE - The process is applicable to the repair or replacement of cartilage damaged by inflammation, trauma, ageing or congenital defection, or replacement of bone, **nose** and **ear** tissues, etc. (8pp
Derwent Class: B04; D16; D22; P32; P34
International Patent Class (Main): A61L-027/00; C12N-011/00
International Patent Class (Additional): A61F-002/30; A61K-037/00; C07C-245/00; C12N-005/00

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File 348:EUROPEAN PATENTS 1978-2003/Jul W03
File 349:PCT FULLTEXT 1979-2002/UB=20030807,UT=20030731
Set     Items   Description
S1       5268   SUBMUCOSA? ? OR (BASEMENT OR HYALINE)()MEMBRANE? ? OR (BAS-
            AL OR BASEMENT)()LAMINA? ?
S2       4960   VOCAL()(CORD? ? OR FOLD? ?) OR LARYNX OR LARYNGE? OR PALAT-
            E? ? OR PALATAL
S3      66820   NASAL OR NOSE OR AURICULA? ? OR EAR OR EARS
S4        674   (HEAD OR NECK)(2N)TISSUE
S5      48963   GRAFT? OR HOMOGRAFT? OR HETEROGRAFT? OR ALLOGRAFT? OR AUTO-
            GRAFT?
S6      98506   IMPLANT? OR TRANSPLANT?
S7       3878   IC=A61L-027
S8      13728   IC=A61F-002
S9        151   S1(5N)S5:S6
S10         5   S9(S)S2:S4
S11       160   S1(S)S2:S4
S12       830   S7 AND S8
S13         1   S11 AND S12
S14       158   S1(S)S2:S3
S15        25   S5:S6(S)S14
S16        20   S15 NOT (S10 OR S13)
S17         0   S7:S8 AND S16

 10/6/2     (Item 1 from file: 349)
00955524
MEDICAL DEVICE

 10/6/3     (Item 2 from file: 349)
00809860
MEDICAL DEVICE

 10/6/4     (Item 3 from file: 349)
00568881
METHOD FOR VOCAL CORD RECONSTRUCTION

 13/3,AB,K/1     (Item 1 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2003 WIPO/Univentio. All rts. reserv.
00817537
METHODS AND COMPOSITIONS FOR RECONSTRUCTION OF MULTILAYERED TISSUE STRUCTURES
PROCEDES ET COMPOSITIONS POUR RECONSTRUIRE DES STRUCTURES TISSULAIRES
    MULTICOUCHES
Patent Applicant/Assignee:
  CHILDREN'S MEDICAL CENTER CORPORATION, 300 Longwood Avenue, Boston, MA
    02115, US, US (Residence), US (Nationality)
Inventor(s):
  ATALA Anthony, 74 Westerly Road, Weston, MA 02193, US,
Legal Representative:
  ENGELLENNER Thomas J (et al) (agent), Nutter, McClennen & Fish, LLP, One
    International Place, Boston, MA 02110-2699, US,
Patent and Priority Information (Country, Number, Date):
  Patent:               WO 200149827 A1 20010712 (WO 0149827)
  Application:          WO 2000US33811 20001214  (PCT/WO US0033811)
  Priority Application: US 99474524 19991229
Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ
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DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ
LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG
SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 11226
English Abstract
The invention is directed to compositions and methods of producing multilayered artificial organs comprising heterogenous polylayers. Polylayers comprising homogenous cell populations are created on one side of a biocompatible substrate such that a chimeric interface is produced between the heterogenous polylayers. Cellular interaction at the chimeric interface produce an interstitial biomaterial with morphological and functional characteristics that resemble the natural in vivo organ.
International Patent Class: **A61F-002/04** ...
... **A61L-027/38**
Fulltext Availability:
Detailed Description
Detailed Description
... interactions which result in the formation of biological material, such as epithelial cells, like, bladder **submucosa** , oral mucosa and **nasal** epithelium. The presence of the **submucosa** provides growth factors and other proteins which promote normal division and differentiation...

**16/6/1 (Item 1 from file: 348)**
00774005
**KERATINOCYTE GROWTH FACTOR ANALOGS**

**16/6/2 (Item 2 from file: 348)**
00773565
**ANALOGS OF KERATINOCYTE GROWTH FACTOR**

**16/6/3 (Item 1 from file: 349)**
00944588
**KERATINOCYTE GROWTH FACTOR-2**

**16/6/13 (Item 11 from file: 349)**
00434349
**KERATINOCYTE GROWTH FACTORS AND THEIR USE IN COMBINATION WITH GLUCAGON-LIKE PEPTIDE DERIVATIVES**

**16/6/14 (Item 12 from file: 349)**
00426179
**KERATINOCYTE GROWTH FACTOR-2 PRODUCTS**

**16/6/15 (Item 13 from file: 349)**
00399410
**AL-2 NEUROTROPHIC FACTOR**

**16/6/17 (Item 15 from file: 349)**
00357661

**STROMAL CELL-BASED THREE-DIMENSIONAL CULTURE SYSTEM FOR FORMING TUBES, TENDONS, LIGAMENTS AND CORRECTIVE STRUCTURES**

**16/6/18 (Item 16 from file: 349)**
00329440
**KERATINOCYTE GROWTH FACTOR ANALOGS**

**16/6/19 (Item 17 from file: 349)**
00329438
**ANALOGS OF KERATINOCYTE GROWTH FACTOR**

**16/3,AB,K/8 (Item 6 from file: 349)**
DIALOG(R)File 349:PCT FULLTEXT
(c) 2003 WIPO/Univentio. All rts. reserv.
00800361
**AUGMENTATION AND REPAIR OF AGE-RELATED SOFT TISSUE DEFECTS**
**AUGMENTATION ET REPARATION DES IMPERFECTIONS DES TISSUS MOUS LIES A L'AGE**
Patent Applicant/Assignee:
GERIGENE MEDICAL CORPORATION, 535 Science Drive, Madison, WI 53711, US, US (Residence), US (Nationality), (For all designated states except: US)
Patent Applicant/Inventor:
KLEINSEK Don A, W5036N County Highway A, Elkhart Lake, WI 53020, US, US (Residence), US (Nationality), (Designated only for: US)
SOTO Adriana, W5036N County Highway A, Elkhart Lake, WI 53703, US, US (Residence), CO (Nationality), (Designated only for: US)
Legal Representative:
SCANLON William J (agent), The Scanlon Law Office, 616 South Ingersoll Street, Suite 1, Madison, WI 53703-3810, US,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200132129 A2-A3 20010510 (WO 0132129)
Application: WO 2000US30623 20001106 (PCT/WO US0030623)
Priority Application: US 99163734 19991105
Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 25243
English Abstract
The present invention discloses methods for the long-term augmentation and/or repair of skin defects (scars, skin laxness, skin thinning, and skin augmentation), cellulite, breast tissue, wounds and burns, urological and gastroesophageal sphincter structures, hernias, periodontal disease and disorders, tendon and ligament tears and baldness, by the injection or direct surgical placement/implantation of autologous cultured cells and/or cultured cell-produced extracellular matrix that is derived from connective tissue, dermis, fascia, lamina propria, stroma, adipose tissue, muscle, tendon, ligament or the hair follicle. The corrective application is done on tissue proximal or within the area of the defect. The method involves retrieving viable cells from the subject, a neonate or human fetus. Alternatively, the corrective

application involves the cells placed in a matrix, preferably comprised of autologous extracellular matrix constituents as a three-dimensional structure or as a suspension, prior to placement into a position with respect to the subject's defect. In a further embodiment, the preferable autologous extracellular matrix constituents are collected from culture and placed in a position with respect to the subject's defect.

Fulltext Availability: Claims

Claim

... The extraction site can be any cartilage bearing area of the body such as the **ears** or joints. Cartilage isolated from a small 3x6mm **ear** punch biopsy or through arthroscopic surgery of a knee is chilled in sterile saline solution...point) from the initial entry point of the passer needle. The dermal or fascial fibroblast **graft** is then pulled into the passer needle and its position may be adjusted by pulling...

...passer needle is pulled backward and removed, thus resulting in the final placement of the **graft** following the final cutting of the remaining suture. Fascial or dermal **grafts** can be placed in either the subcutaneous., dermal or fascial layers for many of the skin defects to be augmented or repaired. Similar **grafts** can be placed in the dermal and subcutaneous layers for treating cellulite. Fascial and dermal **grafts** can be placed in the dermal, subcutaneous, fascial and subjacent areas of the wound area... Fascial flaps made of the autologous fascial cells and/or extracellular matrix can replace mesh **implants** , be used for layer closure techniques or be sutured into the fascial layers of the...